The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

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STANNARIES OF CORNWALL.
IN THE VICE-WARDENS' COURT.

"FOX AND OTHERS v. WILLIAMS."—"FOX AND OTHERS v. SAME"

WHEREAS, the Vice-Warden did, by two several orders or decrees, made in the above-mentioned causes, and bearing date respectively the 7th day of November, 1842, order that a SALE be made of (amongst other things) the MACHINERY and MATERIALS upon and belonging to WHEAL HENRY MINE, in the parish of Wendron, within the said Stannaries, under the direction of the Registrar of the Court, and that the proceeds of such sale should be applied by the said Registrar in the manner directed by the same orders or decrees:—Notice is hereby given, that, pursuant to the said several orders or decrees, a PUBLIC AUCTION will be holden, at Wheal Henry Mine, aforesaid, on Tuesday, the 7th day of March next, at Eleven o'clock in the forenoon, for selling, either together or in lots, the undermentioned MINING MACHINERY and MATERIALS—viz., a 56-inch cylinder PUMPING-ENGINE, nearly new, with a boiler (nine tons), and a capstan, &c., &c.

For viewing the same, application may be made to Captain Perry, at the mine; and, for further particulars (if by letter, pre-paid), to Mr. Roberts, solicitor, Truro.

Dated the 23d of February.

TO MINERS AND OTHERS.—THE WHITE GRIT LEAD MINES, and SMELTING-HOUSES and COLLIERY, at Pontesford and Pontesbury, near Shrewsbury, TO BE SOLD, BY AUCTION, by Mr. TISDALE, on the premises, at the above mines, on Thursday, the 9th day of March, and following days.

AT THE WHITE GRIT LEAD MINES, &c.

A powerful STEAM-ENGINE, 50-horse power, at the White Grit Lead Mines, with boiler; about 120 yards of 16-inch pumps, rods, windbore, cistern, and rods, complete; capstan and rope, shearhead, balance bobs, gin, and ropes, all complete.—Also a powerful ENGINE, 80-horse power, erected at the Gravels, with boiler, pumps rods, shearhead, capstan, and gin, complete.—Likewise another ENGINE, at the Bathelos (nearly new), 14-horse power, upon the most improved principle, with boiler, 9-inch pumps, rods, bobs, pulleys &c., complete. The various gins upon the different shafts, with ropes, pit heads, capstans, and pumps.—Several hundred yards of pumps, different sizes; many hundred yards of wrought and cast iron rails, flat and round rods, air-troughs, timber, iron, miner's tools and chests, fittings up of blacksmiths' and carpenters' shops, with all the stores and implements, and other appurtenances requisite for carrying on an extensive mining establishment.

AT PONTESFORD SMELT-WORKS.

THREE SMELTING FURNACES, in good condition, smelting iron, and all the necessary smelting tools, weighing machines, sand frames, lead moulds, &c.—Also an excellent 4-horse POWER ENGINE, with blowing apparatus, slag-hearths, weighing machines, &c.—An excellent CARRIAGE WEIGHING MACHINE, upon an improved construction; lead and cast iron pumps, with several hundred yards of 2-inch lead pipe, a quantity of iron, wheelbarrows, with the fittings-up of blacksmith's shop, lathe, washing tools, &c.

AT PONTESBURY COLLIERY.

A capital STEAM-ENGINE, 9-horse power, with boiler, pumps, and rods, complete; shearhead, gin, and ropes; also two other gins and ropes, pit heads, kibbles, bobs, and every requisite for a working colliery; together with the fittings-up of a blacksmith's shop, about three bricks, and sundry other effects.

*** Sale to commence each day at Eleven o'clock punctually.

MAESTEG IRON-WORKS AND MARGAM TIN PLATE WORKS, Glamorganshire.—These two important works, now in actual operation, will be OFFERED FOR SALE, BY AUCTION (unless in the mean time disposed of by private contract), in the month of February next. The Maesteg Works consist of TWO BLAST FURNACES, with STEAM-ENGINE, of 40-horse power, have an ample supply of IRON ORE and COAL, extending under 300 acres of land.—The Margam Tin Plate Works are adapted to the make of 800 BOXES TIN PLATES per week; the water-power is considerable; the whole of the machinery in good working order. The present machinery is applicable also to the ROLLING of METALS of every description.

Full particulars, and due notice, will be given of the time and place of sale; meantime the works may be viewed, and any information respecting them obtained, on application to Mr. David Rowland, solicitor, White Lion-court, Cornhill, London, and Mr. William Llewellyn, solicitor, Neath.

ANTHRACITE COLLIERY, Pembrokeshire.—TO BE SOLD, BY PRIVATE CONTRACT, all those old established, lucrative, and valuable works, known as the KILGETTY COLLIERY, in the county of Pembroke, with powerful and excellent MACHINERY, comprising a large extent of the BEST ANTHRACITE COAL in the United Kingdom, and held by leases, for the survivor of two young lives.—The works may be inspected, by order, from Messrs. Rankin, Hord, Longbourne, and Vickerman, Gray's Inn, London; Messrs. William Brough and Son, mineral surveyors, Neath, Glamorganshire; or Mr. R. W. Jones, Loughor, Glamorganshire, who will give particulars, and are authorized to treat for the sale.

COLLIERY, IRONSTONE, IRON-WORK, and FOUNDRY, in Clackmannanshire.—TO BE LET, with entry at the term of Whitsunday next, the VALUABLE COAL-FIELD of NORTH SAUCHIE, near Alloa, at present in the possession of the Devon Iron Company. This coal has been wrought for the last forty years, in connection with the Iron Works at Devon, and is particularly well adapted for the manufacture of iron. The present workings are confined to two seams—the upper five feet and nine feet; but there is an extensive field of the lower five-foot seam to work, and the splint coal in the property is untouched, both of which could be obtained by sinking down the existing pits at an inconsiderable expense; besides these, there are other workable seams in the coal-field still unwrought. The machinery, utensils, and we know's houses will be delivered over to the in next. If required by the tenant offering for the North Sauchie Colliery, arrangements could be made with the Devon Iron Company for obtaining possession at the term of Whitsunday of the ironstone, and of the iron work and foundry, at present occupied by them. In this case, either a lease or a permanent feu right will be given to the ground on which the iron-works are situated, and the leases of the coal and ironstone will be granted for such a number of years as may be agreed on. The ironstone supplies a considerable quantity of the material used by the present company, and the works being well situated for the making of iron, as well as for foundry purposes, could be considerably extended.

For full particulars apply to Robert Jameson, Esq., at Alloa; or to James L. Mitchell, W.S., 8, Randolph Cliff—the latter of whom will show the working plans of the coal and ironstone.—Edinburgh, Jan. 11.

FOR SALE, by PRIVATE CONTRACT, on the ROSEWALL-HILL MINE, one and a half mile from St. Ives, in Cornwall, THREE STEAM-ENGINES, all now only three years ago; No. 1, a 66-inch cylinder PUMPING-ENGINE, 9-feet stroke in the cylinder and 7-feet in the pump, with all wood work complete, including floors and windows and first piece of connection-rod; No. 2, a STAMPING-ENGINE, on Sims's combined cylinder principle—4-horse power. The consumption of coals with this engine never exceeded 25 lbs. per horse power per hour; No. 3, a WINDING-ENGINE, 20-inch, double power, Boulton and Watt engine—6-feet stroke, with winding apparatus from complete. The whole of these engines are on the most modern construction, made of the best material and workmanship; are only one and a half mile from a good shipping port, and may be had very cheap.—Application to be made to Mr. Nicholas Trethewick, of Camborne, to Mr. James Sims, engineer, at Redruth; or to Mr. English, 20, Fleet-street, London.

Redruth, Dec. 5.

TO COAL AND IRONMASTERS.—TO BE LET (with immediate possession), ON ROYALTY, all the MINES of COAL and IRONSTONE in the GREEN LANES COLLIERY, with or without the occupation of the Farm, containing or fifty acres of land, situated at the Shrubbin, near Walsall, in the county of Stafford. The mines that remain to be got consist of about twenty acres of yard coal, fifty acres of four feet coal, fifty acres of bottom coal, and a quantity of the lower seams. About forty acres of the new mine ironstone, the whole of the beds, lower pebble, and mine flats, remain to be got. Several pit sheafs are already sunk on the estate, some of which are getting the yard coal, and others which may be put to get any reasonable quantity of coal or ironstone at a moderate expense.—A railway has been laid down by the Birmingham Canal Company from the Collieries to a basin at the lower level of the Birmingham Canal, and the Birmingham and Essington Canal passes through the upper part of the estate, so that the produce of the mines may be brought to a good market at slight expense. There are engines and other machinery on the ground, to be taken at a valuation.

For particulars apply to Messrs. Dyson and Parrott, solicitors, 21, Bedford-row, London; to Mr. John Barber, on the premises; or to Mr. John Hartland, Tollend, Tipton.

TO COAL AND IRONMASTERS, &c.—Mr. S. B. ROGERS, MINERAL AND METALLURGICAL CHEMIST, of NANT-Y-GLO, near ABERGAVENNY, MONMOUTHSHIRE, respectfully invites the attention of COAL and IRONMASTERS, and the OWNERS of MINES generally, to the importance of accurately ascertaining the MANUFACTURING and COMMERCIAL VALUE of their respective MINERALS. Thirty years' experience enables him to say, that there is no such and certain ground, especially on an ironmaster, to proceed upon, except that of being made fully acquainted with the nature and properties of the materials upon which he may have to work, or that he may happen to discover in the mining operations. This INFORMATION (which, at the present crisis and prospects of the iron trade of the United Kingdom, is of particular importance to all who may be interested therein, either as principals or as shareholders of joint stock companies) I RESPECTFULLY BEG LEAVE TO OFFER, and the terms that will be on pecuniary object of consideration whatever to the proprietors of an Iron-works will be sent in LIEU TO OFFER, post-paid.

February 25.

TO MINERS, CAPITALISTS, and OTHERS.—TO BE SOLD, BY PRIVATE CONTRACT, a SALE OF FREEHOLD LAND, containing about 2,564,000 tons of CAPITAL COAL, in an eligible part of Dean Forest, Gloucestershire, distant about thirty yards from the Severn and Wye Railway, and about fifty yards from a good turnpike road.—Apply to Messrs. Croome and Son, of Lydney, Gloucestershire.

TO MINERS AND IMPORTERS OF ORE.—In order to obviate the disadvantages which importers of ore into Liverpool have hitherto lain under, owing to the want of any suitable premises for the depositing, preparing for sale, and sampling ore, the UNDERSIGNED, in conjunction with others, have ENCLOSED A SPACIOUS YARD, contiguous to the HARRINGTON DOCK, into which CARGOES MAY BE LANDED, direct from the vessel, WITHOUT CARTAGE; and have ERECTED thereon, POWERFUL MACHINERY for CRUSHING and SIFTING COPPER ORE, and PULVERISING SILVER ORE. All requisite facilities are also provided for SAMPLING and SELLING both descriptions, and importers are invited to avail themselves of the advantages which are thus offered them.—Terms may be known on application to TODD, NAYLOR, & CO.
Liverpool, Feb. 15. BROWNELLS & CO.

TO WORKERS OF COLLIERIES.—TO BE LET, for a term of twenty-one years, or for any longer period that may be hereafter agreed upon, with immediate possession, all that superior COLLIERY, known as the FENCE COLLIERY, now in work, situated on the North Midland Railway, about 300 yards from the Woodhouse Mill Station, on that railway, from whence there is a branch made into the colliery. The colliery has been opened some time, and is now in a productive state. The estate on which it is so situated embraces about 120 acres of surface, in a ring fence, and contains the FOUR following BEDS, or SEAMS, of COAL—viz.:

1. The YARD COAL (about twenty-five acres, ungotten), 7 ft. 2 in. thick, twenty yards below the surface.
2. The FURNACE COAL (about thirty acres, ungotten), 7 ft. 6 in. thick, thirty-two yards below the surface.
3. The FOUR-FEET or HIGH HAZLE COAL (about 100 acres, ungotten), 4 ft. thick, seventy-two yards below the surface.
4. The DARNELL COAL (about 120 acres, ungotten), 4 ft. 6 in. thick, 132 yards below the surface.

The workings in the two upper beds (so far as they have been carried out), together with other experiments and trials made by boring, &c., prove most satisfactorily that all the coals are regular and free from faults throughout the estate, while the quality of the four beds is well known and appreciated in the neighbourhood, and in all the markets into which they have been sent. The first bed produces a very excellent house fire coal and the slack from it is much approved of in blast for working steam-engines with. The second, third, and fourth beds are each of very superior quality for making coke for locomotive engines, and for all manufacturing and domestic purposes; and it is believed that the county of York does not produce a fuel better adapted for general use. A little water produced in twenty-four hours, by working the two upper beds, is pumped to the surface in twelve hours by a 7-horse power steam engine which also draws the coal from the second bed, as well as the empty railway waggons from the North Midland Railway up to the pits. All the coals of this colliery are, and always will be, worked and brought to the surface at an unusually moderate cost, while the markets for them, by means of the North Midland and other railways, rivers, and canals, are sure and extensive. The colliery is ten miles from Sheffield by railway, and six miles by the turnpike road, which passes within forty yards of the pits.

The cost of transit by railway to Sheffield is 1s. 3d. per ton; to Hull, by railway and water carriage, 3s. 6d. per ton; and to London, via Hull, 7s. 6d. per ton.

All these beds and mines of coal will be set at a moderate mine rent; but a lessee will be required to pay an annual minimum, or rent reserved rent, and also to purchase and pay for the machinery, improvements, materials, and the beneficial preparatory work done, as well on the surface as under ground, the railways, railway waggons (ten in number), together with the twenty-four coke ovens now in use, according to a fair valuation thereof.

One engine-pit, or shaft, about 132 yards deep, will unwater the whole of the coals here referred to, and for which it is computed a steam engine, of 40-horse power, will be amply sufficient.—The lessee may be accommodated with the farm-house, which overlooks the colliery, and with the whole or any part of the farm, at Lady-day next, or with a genteel cottage residence, with stables, &c., and about ten acres of old meadow pasture, now occupied by the proprietor.

For all necessary information and particulars, apply (by letter) to T. Jeffcock, Esq., Brush house, near Sheffield; to George Leather, Esq., Boreston park, near Leeds; or to Mr. W. W. Bailey, mining engineer and mineral surveyor, Kilburne, near Derby.—Feb. 9.

FOR SALE, TWO ONE-HUNDREDTH SHARES in the GOGERDDAN MINES, comprising the Bog Mine, Darren, and Cwmsymlog, the celebrated mine from which sir Hugh Middleton made more than one of his. The present workings have just reached about ten fathoms under the old mine, which is very attractive, and promise is held out of immediate profits.—Application to Mr. English, 20, Fleet street, London.

WANTED TO PURCHASE, a GOOD SECOND-HAND PORTABLE STEAM-ENGINE, from 20 to 30 in. diameter of cylinder, from 4 to 5 feet stroke, with fly wheel, and if with winding apparatus it will be preferred.—Apply to J. Ormiston, at Flint, with particulars and price, delivered on board at the most convenient port, or delivered in the port of Flint.

SOUTH CARADON MINE.—ONE 128TH SHARE in this MINE, TO BE SOLD, BY PRIVATE CONTRACT.—Apply to W. Tremery, jun., Mining Agent and Sharebroker, (from Redruth, Cornwall), 5c, Threadneedle street, London.

CONSOLIDATED COPPER MINES OF COBRE ASSOCIATION.—Notice is hereby given, that a SPECIAL GENERAL MEETING of proprietors will be held at the office of the association, 56, Austinfriars, on Monday, the 27th day of February inst., at One o'clock precisely, for the purpose of ELECTING an additional DIRECTOR, in pursuance of the unanimous recommendation of the board of directors.

By order of the court of directors,
56, Austinfriars, Feb. 8. W. LECKIE, Secretary.

CORNUBIAN MINING COMPANY.—The directors of this company having made a further CALL of TEN SHILLINGS per share, pay also on or before the 20th day of March next, the shareholders are requested to PAY the same to the Union Bank of London, 9, Mansgate street.

44, Finsbury-square, Feb. 21.

WEST CORK MINING COMPANY.—Notice is hereby given, that the GENERAL HALF-YEARLY MEETING of the shareholders will be held at the Garraway and Virtues Tavern, Cornhill, in the city of London, on Thursday, the 16 day of March next, at One o'clock in the afternoon precisely, on the general business of the company, and also for the election of two directors and one auditor; and take notice, that every proprietor intending to become a candidate to fill the office of director or auditor, must, within fourteen days from the insertion of this advertisement, signify, by notice in writing under his hand, stating the place of his residence and addition (such writing to be left within the same fourteen days at the office of the company, 60, Coleman street, in the city of London), his intention so to become a candidate. The retiring directors and auditor are re-eligible, and will offer themselves for re-election.

By order of the board,
London, Feb. 9. T. M. SHADWELL, Secretary.

THE PATENT SAFETY FUSE, FOR BLASTING ROCKS IN MINES, QUARRIES, AND FOR SUBMARINE OPERATIONS.—This article affords the safest, cheapest, and most expeditious mode of effecting this very hazardous operation. From many testimonials to its completion with which the Manufacturers have been favoured from every part of the kingdom, they select the following letter, recently received from John Taylor, Esq., F.R.S., &c., &c.

"I am very glad to hear that my recommendations have been of any service to you. They have been given from a thorough conviction of the great usefulness of the Safety Fuse; and I am quite willing that you should employ my name on all occasions of this."

Manufactured and sold by the Patentees, RICKFORD, SMITH, and DAVEY, Camborne, Cornwall.

TO MINING ADVENTURERS AND OTHERS.—Important SAVING of FIFTY PER CENT. in the ARTICLE OF GREASE.—JOSEPH PERCIVAL, of Groom street, Wellin ton street, Bloomsbury-road, Lon on, begs respectfully to inform the MINING INTEREST, that he MANUFACTURES an IMPROVED PATENT ANTI-FRICTION GREASE, for wrines, tram waggons, cart flanges, and all purposes for which oil and grease are now used. A sample will be forwarded free, on application as above.

IMPORTANT PATENT IMPROVEMENT IN CHRONOMETERS and WATCHES.—E. J. DENT, 82, STRAND, who obtained the high distinction of receiving the Government Reward for the superiority of performance of the best chronometer ever submitted to receive another public trial, begs to acquaint the public that the MANUFACTURE of his WATCHES, CHRONOMETERS, and CLOCKS, is SECURED to him by THREE SEPARATE PATENTS, respectively granted in 1825, 1826, and 1842.—Dent's Lever Watches, jewelled in four holes, 4l. 4s. each; in gold cases from 6l. 6s. to 8l. 8s. extra.—Gold Horizontal Watches, with gold dials, from 6l. 6s. to 8l. 8s. each.—Dent's "Appendix" to his recent work on "Time-keepers," is now ready for circulation.

ROYAL CORNWALL POLYTECHNIC SOCIETY.
PREMIUMS FOR 1843.—NOT CONFINED TO THE COUNTY.

A Premium of Fifty Pounds, by the Rev. Canon Rogers, to the superintending engineer who shall have been employed to erect a machine for raising miners from underground, in any Cornish mine.—The offer to continue in force till the 20th of March, 1843.

A Premium of Ten Pounds, by the Society, for the best experimental examination of any of the elements of the steam-engine, a knowledge of which may indicate the relative value of the different improvements which have been of late made in the engines of Cornwall.

Two Premiums by the Society, of Three Pounds and of Two Pounds, for the two best and most accurate details of any recent luminous or vaporous appearance, or emanations from the earth, in the vicinity of mines or mineral veins.

A Premium of Ten Pounds, by W. T. Praed, Esq., M.P., for the best chemical or mechanical method of ventilating mines, that can be applied to the Cornish mines with advantage.

A Premium of Ten Pounds, by J. H. Tremayne, Esq., for the best available method, or improvement on the plan already adopted at Tresavean, for facilitating the ascent and descent of miners.

A Premium of Ten Pounds, by T. J. A. Roberton, Esq., for the plan, or model, which obtains the above premium, provided it be accompanied by such estimate of expense as shall be approved of by the Judges.

A Premium of Five Guineas, by John Taylor, Esq., F.R.S., for the most complete and accurate accounts of the quantity of water supplied to the boilers, the number of bushels of coals consumed, and the duty performed by an engine, for a period of not less than six months.

A Premium of Ten Pounds, by Captain Jenkins, of Assam, in India, for the best essay on the several descriptions of fishing boats used on the coasts of Cornwall, and in the Scilly Islands.

A Premium of Five Pounds, by Henry English, Esq., Editor of the *Mining Journal* and *Mining Review*, for the best paper, containing an account of any methods or plans practised in any other mining districts, advantageously applicable to the Cornish mines. To be accompanied by the necessary drawings.

A Premium of Ten Pounds, by Lieut.-Colonel Sykes, and Sir C. Lemon, Bart., for the best report on the agricultural produce of any considerable portion of any Union in the county of Cornwall, in one of the years 1842, 1841, or 1842.

A Premium of Ten Pounds, by the Society, and H. English, Esq., for the most accurate account of the quantity of water, found at different depths, in the mines of this county, with a view of ascertaining if the quantity of water increases with the depth, or otherwise.

A Premium of Five Pounds, by Sir C. Lemon, for the best paper on the fisheries of Cornwall, or of any part of the county.

A Premium of Five Pounds, by the Society, for the best design of a detached cottage, or cottages, for the poor, regard being had to the material usual in the mining or rural districts, to the habits of these classes of the population, and to the economy of the construction.

A Premium of Ten Pounds, by the Society, for the best practical method of obviating the corroding effects, produced by solutions of copper and other substances, in the feed and injection water on the boilers, and other parts of the steam engines, used in Cornwall.

A Premium of Seven Pounds, by the Society, for the best account of the space passed through by the piston of any pumping engine in Cornwall (not less than fifty inch cylinder) for a period of six months.

A Premium of Three Guineas, by Charles Fox, Esq., for the best analysis of the air taken at the termination of a "shore" of two months.

Four Premiums by Charles Fox, Esq., the first of Seven Guineas, for the best series of instructions for a general and particular examination of every steam-boat engineer; the second Premium, of Five Guineas, for the second best; the third, of Three Guineas, for the third best; and the fourth, of Two Guineas, for the fourth best.

A Premium of Twenty Pounds, by Captain Jenkins, and Messrs. G. C. and S. W. Fox and Co., for the best method of enclosing pilchards in deep water, and securing them in a fit state for curing—such method to be in actual operation.

A Premium of Five Pounds, by the Society, for the best shaded drawing from a plaster cast after the antique.

A Premium of Five Pounds, by the Society, for the best drawings of buildings illustrative of the five orders of architecture.

THE FOLLOWING PREMIUMS, BY THE SOCIETY, FOR PERSONS UNDER EIGHTEEN YEARS:—

A Premium of Two Guineas, for the best finished sketch-book from nature.
A Premium of One Pound, for the best pencil drawing of a landscape from nature.
A Premium of One Pound, for the best water colour drawing from nature.
A Premium of One Pound, for the best pencil or chalk head.
A Premium of One Pound, for the best architectural drawing after a building in the county.

SCHOOL PREMIUMS FOR 1843.

A Premium of Two Guineas, for the best map which shall include the most extensive and accurate series of maritime, or inland, discoveries, in any part of the world.

A Premium of One Pound, for the best perspective outlines, with illustrations.

The conductors of schools in this county are invited to encourage their pupils to compete for the above premiums, and to prepare other productions for the exhibition, when suitable prizes will be awarded to the most deserving.

Charles Fox, Esq., office to the Society, as long as he continues a member of it, the sum of Four Pounds annually; to be distributed to the respective sums of Two Pounds, One Pound, Twelve Shillings, and Eight Shillings, to four several prizes, for the greatest and most correct mass of snow one mile, previous, or European county, comprising not less than 150 square miles, or a portion, of not less than 100 square degrees, of some undrained region. These prizes to be called the "Landor Prizes," in commemoration of those enterprising travellers, Richard and John Landor.

Members and persons resident in the county may compete for any of the prizes offered by the society.

A few prizes will be given for useful inventions and improvements, sent to the exhibition on by persons residing out of the county.

Persons residing out of the district cannot compete for prizes in the fine arts, unless they become members of the society.

Prizes will be given for well conducted experiments in the arts, sciences, and manufactures, having a practical tendency.

The society being desirous of encouraging excellency of workmanship in the handicraft trades, will place at the disposal of the judges a certain number of prizes, to be awarded to tradesmen and artizans.

Much inconvenience and disappointment having arisen from the late period at which articles have been sent in for competition, it is particularly requested that, on all future occasions, they shall be lodged at the Polytechnic Hall one week before the day of exhibition, whereby the merits of every article will be more particularly examined, and all the arrangements made more perfect.

Any other information concerning the society, may be had on reference to the members of the committee, or the agents in the county, from whom the reports of the society may be obtained.

Any communications of general interest will, if approved of by the committee, be immediately printed by the society, and circulated without delay.

ROBERT HUNT, Secretary, Falmouth.

AGENTS.—Falmouth, Mrs. Trefusis; Truro, Mrs. Heard; Penzance, Mr. Vibert; Helston, Mr. H. Carlyon; Redruth, Mr. R. Rice, jun.; Camborne, Mr. L. Peytoe; St. Austell, Mr. J. Drew; Devonport, Mr. Cruttenden; Liskeard, Mr. R. Sandercomb; Launceston, Mr. S. White; Bodmin, Mr. Lindell; London, Dwglas and Marshall, 4 Spencer Hall court, and Weale, 59, High Holborn.

PATENT PERRYIAN GRAVITATING INKSTAND, AS CHEAP AS THE COMMON INKSTAND.

Low cost and great invention is exceedingly well adapted for general use; it preserves the ink in great perfection for months long clear, without the trouble of refilling it; it excludes dust, &c., and at any moment the writer is supplied with ink in the most perfect state. The patentees strongly recommend it to the notice of bankers, merchants, as bidders, Government offices, public companies, shops, sale rooms, &c., as a great improvement over the ordinary inkstand, both as regards economy, neatness, and considerable saving of ink. This inkstand will be found invaluable in keeping the ink always clear and fit for use in every climate. It is of a symmetrical form, with a gratifying motion, adjusted so as to supply the digging cup with ink, which can be returned into the cylinder when not in use. Economy, cleanliness, and convenience, are secured by it, and it cannot get out of order.

TESTIMONIAL.

"We are writing at this moment by the aid of PERRY and CO.'s PATENT GRAVITATING INKSTAND, which presents a constant supply of ink for the pen; and, when closed, it excludes all dust and dust-elements to which all the ends of use of office inkstands are liable. The introduction is both simple and useful."—*Morning Herald, Dec. 5, 1842.*

"It is somewhat difficult to describe in general phraseology the entire preservation of the ink from becoming foul or thick, and that, by a simple arrangement, the quantity of ink is readily apportioned to the wish of the writer."—*Globe, Dec. 12, 1842.*

"Simplicity, economy, neatness, and certitude to our mind all combine."—*John Bull, Dec. 5, 1842.*

"Of the inkstand, called 'GRAVITATING,' we can pronounce favourably—upon re-perusal, we can say it is astonishing."—*Atlas, Dec. 10, 1842.*

"It preserves the quality of the ink."—*Bell's Weekly Messenger, Dec. 5, 1842.*

PATENT PERRYIAN PENS.—Prices rendered accessible to all writers. JAMES PERRY and CO. have just introduced a new one out of their excellent METALLIC PENS, in boxes, containing nine pens, &c., to which, including a quarter of a hundred, and on cards, all of which are considered good under the protection of their patents, suitable for every description of writing, and particular to all the ordinary work pens in general use.

PERRYIAN LIMPID INK.—This INK has a [illegible] peculiarly beautiful to itself, and does not corrode metallic pens as other inks.

In bottles, 6d., 1s., and 2s. each.—Also, in POWDER, for [illegible]

Sold by all stationers and dealers in [illegible] town, and at [illegible]

Red Lion-square, London.

LAW INTELLIGENCE.

HOT-BLAST—NEILSON'S PATENT.

HOUSE OF LORDS—FEB. 20.

HOUSEHILL COAL AND IRON COMPANY v. NEILSON AND OTHERS.—This was an appeal against a decree of the Court of Session, establishing the validity of a patent, taken out by *Mr. Neilson*, in the year 1828, for "his invention for the improved application of air to produce heat in fires, forges, and furnaces, where bellows or other blowing apparatus are required." *Mr. Neilson* complained of an infringement of this patent, in England, and brought an action, in the Court of Exchequer, when he succeeded; and he also took proceedings, with the like result, in the Court of Chancery. The appellants were then charged by him with having infringed his patent at their furnaces in Scotland, and this suit was instituted. The Court of Session sent to a jury certain issues, the material one of which was, whether, in the course of the year 1840, and during the currency of the letters patent, the defendants did, at their works, use machinery or apparatus substantially the same with the machinery or apparatus described in the pursuer's specification?—Whether the invention, as described in the letters patent, was not the original invention of the pursuer?—Whether the description of it, in the specification, was not sufficient?—and whether it was not practically useful? The jury returned a verdict for the pursuer on all the issues. The appellants presented exceptions, to the number of thirteen, against the evidence received at the trial, and the manner in which the case was left to the jury. The Court of Session disallowed these exceptions, and gave judgment for *Mr. Neilson* and the other pursuers. Against this judgment the present appeal was brought.

The hearing of the case was proceeded with until Tuesday afternoon, when the *Lord Chancellor*, being summoned to attend a Cabinet Council, postponed it until Monday next.—A detailed report of the arguments will appear when the case is concluded.

LIABILITY OF DIRECTORS OF PUBLIC COMPANIES.

VICE-CHANCELLORS' COURT—FEB. 23.

DEEKES AND OTHERS *v.* STANHOPE AND OTHERS.—This cause has arisen out of the failure of that bubble speculation, the Marylebone Joint-Stock Banking Company. The object of the suit is to make the *directors*, the Hon. Col. L. Stanhope, and several other gentlemen, answerable for the losses which the plaintiffs and other shareholders sustained from their alleged neglect and mismanagement. The bill, which is very voluminous, prays that an account may be taken of all monies and securities received by the *defendants* on account of the company, and of all shares allotted and disposed of by them, and all monies received on account of such shares, with the proceeds of the sale of the houses belonging to the company—all monies lent, and the securities held for the same, and all sums lent on insufficient security, with the amount received by David Hannay, &c.—To this bill, so framed, and praying such extensive relief, the defendants have put in a demurrer on two grounds—want of equity, and want of parties. The counsel for the defendants argued in support of the demurrer, but the learned counsel not having concluded their arguments at the rising of the court, the further hearing of the case was postponed.

The case was concluded on Thursday, when HIS HONOUR observed that, under all the circumstances, he did not think it would be right to shut out the plaintiffs from all relief in a case of this nature, as the statements in the bill could not be pure invention, though, perhaps, the language might be more clear and precise. Though the bill had been once amended, there had been no argument on the former demurrer; and he thought it would be better, as the case could not proceed in the present construction of the record, to allow the demurrers generally; giving the plaintiffs leave to amend their bill, as there was some sort of case made out in which relief ought to be given in equity. He should, therefore, allow the demurrers, with leave to amend.

PROCEEDINGS OF SCIENTIFIC BODIES.

INSTITUTION OF CIVIL ENGINEERS.

FEB. 21.—The PRESIDENT in the chair.—At the commencement of the meeting, his Grace the Duke of Buccleuch was presented on his election as an honorary member.—The discussion was renewed upon Mr. Clay's process of making malleable iron at one process from haematite ore. It was shown that of the 25,000 tons of steel made annually in this country, not more than 3000 tons were made from the best quality of Swedish iron, the rest was made from inferior charcoal iron from Russia and Germany, or from English iron, which was not well calculated for converting; it was, therefore, highly desirable to encourage Mr. Clay's process, which, if as successful as was stated, was calculated to emancipate Great Britain from being tributary for steel-iron to foreign countries, and enable her to use the indigenous produce of her own rich, and comparatively unworked mines of haematite ores in Lancashire, Devon, and Cornwall. The superior quality of the Indian iron for making steel, was treated of at great length, the yet undeveloped resources of that great country, which only required to be better known, in order to induce a proper appreciation of them.

An account was then given by *Mr. I. O. York*, of "the Experiments upon the Strength of the Ordinary Solid Axles, as compared with the Hollow Axles," invented by him. The paper described the common causes of fracture, attributing it to the concussion and vibration produced by various circumstances, such as a bad state of the line, the sudden opposition of any obstacle on the rails, or the shocks arising from the wheels striking upon the blocks or the chairs when thrown off the line. Those shocks, which it was impossible to calculate the extent of, it was contended, should be provided for, by axles which would bear a series of heavy blows without fracture. The force of vibration, and its tendency to produce fracture in rigid bodies, was then treated of, with its effect in destroying the most fibrous texture of iron where elasticity was prevented, as in the case with railway axles, comparing the action with that upon the axles of ordinary road carriages, where the concussion was reduced by an elastic medium, such as the wood spokes of the wheels, which were bad conductors of vibration. By calculation, it was shown that the twisting strain arising from the curves of the railway was of too small an amount to be considered as a cause of destruction to the wheels or axles, even on lines with curves of short radii; and it was submitted that the requisite qualities in a railway axle were—first, the greatest possible degree of rigidity between the wheels, to prevent the axle from bending or breaking from concussion; and, secondly, the greatest quantity of elasticity and freedom in the particles of iron within the axle itself, to prevent the injurious effects of vibration. It was contended that the hollow axle was better able to resist those strains than a solid one, because the comparative strengths of axles are as the cubes of their diameters, and their comparative weights only as their squares—consequently, with less weight in the hollow axle, there must be an increase of strength, and also that the vibration had a free circulation through the whole length of the hollow axle, no part being subject to an unequal check from the vibration, and that the axle would, therefore, receive less injury from this cause than a solid one.—A long series of experiments, which had been made in the presence of Major-General Pasley and numerous engineers, were then read, and showed results confirmatory of the position assumed by the author of the paper.—In the discussion which ensued, it was allowed that, theoretically, the hollow axles must be stronger than the solid ones, inasmuch as the same weight of metal was better distributed, and the practical experiments fully bore out the theory.—Some curious specimens of solid axles, which had borne a great number of blows before breaking, were exhibited by the Patent Axle Company, from Wednesbury; the qualities of the iron was excellent, but had the same material been manufactured into hollow axles, it was agreed that many of the melancholy accidents upon railways would not have occurred.

The papers announced to be read on Tuesday, the 28th instant, were—"Description of the Rivets over Buckingham Palace, Covered with Lord Stanhope's Cement," by P. Hoby Annis, Inst. C.E.—"Account of the Victoria Bridge, on the Durham Junction Railway," by D. Bremner, Assoc. Inst. C.E.—"Account of Repairing a High Chimney at Messrs. Cooper's Cotton Works, at Glasgow," by J. Cuthbert, Grad. Inst. C.E.

LONDON ELECTRICAL SOCIETY.

FEB. 19.—Mr. L. Hoby, M.B., delivered a lecture "On Animal Electricity," illustrated by discoveries of galvanic and torpedo, as well as by diagrams and experiments. His object was to support that theory which conceives an identity between common energy and animal electricity. He observed many sound reasons in favour of such opinion. Not the least worthy of notice among them were those:—That the portion of brain whereon the nerves of the battery connect is more fully developed in electric fish than in any analogous kind—that the supply of nerves greatly exceeds what would be required for the mere animal life of the organ—that the electric power depends on the integrity of the nerves—and that exhaustion follows its display; moreover, that electricity gives *dead* nerves the power of operations on the muscles.

FEB. 21.—Mr. Pollock communicated the results of a long experimental investigation on the nature of electric phosphorescence. It appears to him that this phenomenon does not occur in cases of chemical change and combustion, but that it is due to the return of particles in their normal condition, from a previous state of induction. Several curious cases are given of the effect of intense excite'ing bodies to a state productive of the same effects as crystallism.—Mr. Walker (the secretary) laid before the society some drawings he had taken of a peculiar instance of *Lepidoptera Noctua* during the discharges of a large battery.—Mr. Weekes introduced his "Registrar" for Justices, with a short explanatory notice of the additional instruments of observation which he intends exhibiting during the present year.

[illegible] We understand that a bridge has been constructed by Mr. Samuel Brown, jun. [illegible] of the Wye valley, for leaving the railway at its summit, Pigeon House, Llangattock, across which the trains pass [illegible] of descent is 1 in 22, the rails, however, in the ascent [illegible] of opposite

PROCEEDINGS OF PUBLIC COMPANIES.

DURHAM COUNTY COAL COMPANY.

The thirteenth half-yearly general meeting of proprietors in this company, was held at the Sun Hotel, Darlington, on Thursday, the 23d instant.—*F. S. Stokes*, Esq., in the chair.—Mr. CLEAVER read the notice convening the meeting, and the *directors' report*, in which they express their regret in not being able to communicate a more prosperous state of the trade in which they had embarked, they had to report a continued and heavier depression, and a considerable falling off in the general consumption as compared with the previous year, being a decline of 73 per 1000. The projected arrangements with regard to Gordon and Eastwood Collieries, they were sorry to say, were still matters of negociation, owing to the complicated forms in Chancery; they hoped, however, for a favourable termination. The Whitworth Colliery had not produced the beneficial results expected, and Mr. Shafto, the landlord, had offered some reduction in the rent. From the Coxlee Colliery the shareholders ought to have anticipated large profits, which expectation, however, had been frustrated by the regulations in the coal trade, which confines the "get" of this colliery to 29,000 chaldrons; the directors are, however, contending for a larger proportion, as, on looking at others in the neighbourhood, and the importance of Coxlee, they are satisfied it ought to have a larger basis. In the action with the Stockton and Darlington Railway Company, they had succeeded in compelling them to pay into court the amount of their overcharges, 7997*l.* 16*s.* The total amount of their claim being 10,132*l.* 15*s.* 6*d.*, exclusive of the amount claimed in the action, and not much doubt was entertained of a favourable result of the appeal, the whole judicial bench having recorded in their favour; notwithstanding this, the Durham County Coal Company are now paying rates to the railway, to the amount of nearly 10,000*l.* per annum. The report further alluded to the change in the management of the colliery—the removal of *Mr. M. Dunn*—and entered at great length into the charges brought by that gentleman against the direction.—A very long and irregular discussion ensued, during which Mr. DUNN endeavoured to vindicate his conduct; but the shareholders appeared to be entirely satisfied with the course adopted by the directors, and, on the motion of the Rev. G. DIXON, seconded by Mr. LEEMAN (of York), it was resolved—"That, in regard to the improper and scurrilous attacks, made on the Durham board of directors, by Mr. Dunn, in respect of his dismissal from the office of viewer of this company, this meeting beg to record their expression of the high opinion they entertain of the Durham board, in whom they repose their entire confidence."

[There are many points—incidentally mentioned during the meeting—that the late hour at which we received our report will not allow us to enter upon this week, but which will not be lost sight of.]

STRAY PARK AND CAMBORNE VEAN MINES.

A general meeting of shareholders in these mines was held on Thursday, the 16th inst., when the accounts were submitted, from which it appeared that, for the four months ending December, 1842, the tutwork cost had been 1211*l.* 14*s.* 3*d.*; tributo, 1116*l.* 2*s.* 2*d.*; merchants' bills, 1006*l.* 9*s.* 8*d.*; and lords' dues, 227*l.* 19*s.* 4*d.*—while ores sold had amounted to 3340*l.* 3*s.*, and there remained a balance in hand of 37*l.* 19*s.* 9*d.* It was resolved that the accounts, having been examined, be allowed, and that Mr. Vawdrey be in future charged at ten guineas per month, instead of eight guineas, as at present.

WEST WHEAL JEWEL MINING ASSOCIATION.

A special meeting of the shareholders of this company was held on Thursday, the 23d inst, at the office, 23, Threadneedle-street, JAMES HERON, Esq., in the chair.—The notice convening the meeting having been read by the SECRETARY, it was moved by Mr. MOUNT, and seconded by Mr. GARLAND, "that the resolution, passed at the special general meeting held on the 24 inst., by virtue of which Mr. Cardosa and Mr. John Lyle were removed from the committee of management of this mine, be now confirmed," which having been done unanimously, the meeting adjourned.

NEWCASTLE AND DARLINGTON JUNCTION RAILWAY.

The second half-yearly meeting of this company was held at the York Station, on Monday, the 13th instant, GEORGE HUDSON, Esq., in the chair.—The SECRETARY read the report, from which it appeared that it was probable the railway would be completed by the time mentioned in the last report—viz., July, 1844; and thus open an uninterrupted line of railway communication between London and Carlisle. The statement of accounts showed that the amount received on calls, &c., was 70,513*l.* 6*s.*; and disbursements, 45,414*l.* 19*s.* 8*d.*; leaving a balance in hand of 23,098*l.* 6*s.* 4*d.*—After some conversation, in which it was stated that another call would be required about April, the report was adopted.—Thanks were voted to the chairman and directors, and the meeting separated.

GREAT NORTH OF ENGLAND RAILWAY.

The fourteenth half-yearly general meeting of proprietors was held on the 15th inst., at the Sun Inn, Darlington, GEORGE H. WILKINSON, Esq., in the chair.—From the report, it appeared that the total expense of the construction of the railway had been 1,192,893*l.* 10*s.* 9*d.*, in addition to which there was due for land 71,134*l.* 19*s.* 9*d.* The directors recommended cottages along the line, for the plate-layers, which would pay about 7*l.* per cent. on the outlay (about 2000*l.*), add to the comfort of the men, and very much increase the security of the passengers, in cases of obstruction or delay of trains. In the revenue account there was a balance of profit on the half-year of 8516*l.* 7*s.* 3*d.*, after deducting the reserve fund, from which they recommended a dividend of 1*l.* 5*s.* per share.—A long conversation took place respecting the expenditure of the line over and above the estimated amount; a tabular statement was drawn up by Mr. J. PEASE, jun., showing the comparison, which gave much satisfaction; and it was distinctly understood from the directors that the whole line would be completed for the sum of 1,300,000*l.*—The report was then adopted; a dividend of 1*l.* 5*s.* per share declared; Mr. E. Oxley and Mr. Smales, of York, were re-elected directors; Mr. A. Dinsdale was appointed an auditor, in the room of Mr. Wheatly, resigned; thanks were voted to the chairman, and the meeting separated.

YORK AND NORTH MIDLAND RAILWAY.

The thirteenth general half-yearly meeting of shareholders to this company was held at the Board-room, in the city of York, on Monday, the 13th inst., GEORGE HUDSON, Esq., in the chair.—The receipts for the half-year had been 46,385*l.* 11*s.* 11*d.*; working the line, 17,972*l.* 9*s.* 6*d.*; and interest, 4386*l.* 9*s.* 1*d.*; making a total disbursement of 21,430*l.* 9*s.* 5*d.* The Leeds and Selby Railway account showed a balance of 1165*l.* 19*s.* 4*d.* in favour of the York and North Midland Company, as lessees of the line. The directors recommended a dividend of 3*l.* 10*s.* per share, and interest on the half-shares at the same rate; this would leave a surplus of 2602*l.* 0*s.* 10*d.* to be added to the reserved fund, which would then amount to 6679*l.* 17*s.* 2*d.* On the debt of 450*l.*, owing to various persons, the interest would be reduced from 5*l.* to 4*l.* per cent.—The report was adopted, the dividend declared, and thanks were voted to the chairman and directors.

NORTH MIDLAND RAILWAY.

The half yearly general meeting of the proprietors in this company was held at the Leeds Station, on Friday, the 24th inst., W. L. NEWTON, Esq., in the chair.—The report alluded to the difficulties the directors had had to contend with, in carrying out the reduction of expenditure decided upon, the engine drivers and others having combined to prevent a reduction of their numbers; they had substituted, therefore, in twelve new *set of men*, who had, in most instances, proved expert and able—they much regretted the accident which had terminated in the loss of life.—The accounts for the half-year showed a diminution of receipts of 3371*l.*, and of expenditure 11,124*l.*; net profit, 32,442*l.*, from which the directors recommended a dividend of 1*l.* 6*s.* per share, and 2000*l.* to the reserve fund.—A stormy discussion ensued, but eventually the report was adopted, and the meeting separated.

TAFF VALE RAILWAY COMPANY.

The half-yearly meeting of the shareholders of this undertaking was held at the Angel Hotel, Cardiff, on Tuesday, the 21st instant.—Sir JOHN J. GUEST, M.P., in the chair.—Mr. MORGAN (the secretary), *pro tem.*, read the report; the receipts from the opening of the line for the six months to December 31, has been 16,279*l.* 13*s.* 10*d.*; the disposable balance, after paying interest on loans and the new shares, was only 342*l.* 9*s.*, which preventing a dividend being made at the meeting. The sum of 1*l.* 4*s.* 6*d.* per share had been carried to the credit of the old shareholders as capitalised interest, making the nominal amount of each share, 110*l.* 14*s.* 6*d.* A difference having taken place between the directors and the late secretary, Mr. Burgess, the report stated that the connection between them had terminated, and on the clause much discussion ensued. This difference arose in consequence of an investigation into the accounts of Mr. Fowler, one of the contractors, whom the directors allege had been enormously paid for extra works, and whose contract, made under the advice of the secretary, had been highly disadvantageous to the company. Mr. Burgess was present, and stated that his wish was to leave with as unsullied character.—A motion was made for a committee of inquiry, which, however, was lost by a small majority.—The report was then adopted, thanks were voted to the chairman and directors, and the meeting separated.

SUNDERLAND JOINT-STOCK BANKING COMPANY.

The seventh annual general meeting was held at the bank, on Tuesday the 14th inst., ANDREW WHITE, Esq., in the chair. From the report of the directors, it appeared that the net profits for the year had been 4761*l.* 17*s.* 6*d.*, a dividend was paid in June of 4 per cent., and the directors now recommended a like dividend, making 8 per cent. for the year, which will leave a balance of 761*l.* 17*s.* 6*d.*, to close to the profit and loss, which was now carried to 1845. 17*s.* 9*d.* The directors stating [illegible] that the affairs of the bank were in a most healthy state, and that they only wait for a general revival of commerce, to enable them to give to the proprietors a steady, and, they trust, increasing profits. The report was adopted, and, in consequence of the death of Dr. Miller, one of the directors, it was resolved not to fill up the vacancy, thus reducing the number of the directors in future to four.—The thanks of the meeting were then voted to the chairman, and the meeting separated.

GENERAL STEAM NAVIGATION COMPANY.

The half-yearly meeting of the proprietors was held on Tuesday, the 21st inst., at the office of the corporation, 69, Lombard-street, and was numerously and respectably attended. The chair was taken by JOHN WILKIN, Esq. (in the absence, from illness, of Wolverley Attwood, Esq., the chairman of the company), when the report of the directors and the accounts for the year were read, from which it appeared that, notwithstanding the great depression of trade, the operations of the last year had been successful, and that the general condition of the company's affairs was highly satisfactory.—The customary dividend and bonus were declared, after which the cordial thanks of the proprietors were voted to the chairman and directors, for their continued exertions for the interests of the company.

LICENSED VICTUALLERS' AND GENERAL FIRE AND LIFE ASSURANCE COMPANY.

The seventh annual meeting of this company was held at the establishment at London-bridge, on Monday, the 20th instant.

The chair was taken by CHARLES BLEADEN, Esq., when the SECRETARY (Mr. *Fawcett*) read the *report* of the directors, which congratulated the proprietors on the increase of business which had taken place, and more particularly since the last annual meeting—the fire and life assurances, being originally under a million, having now extended to nearly eight millions. The accounts would not be gone into, as it had been done at the quinquennial meeting two years since. The directors regretted having to announce the decease of one of their oldest friends—viz., Ald. Sir John Cowan, Bart., who had always been most anxiously devoted to the society. Pursuant to the form of the Deed of Settlement, Charles Bleaden, Esq. (the chairman), John Lund, Esq., and Henry Jackson, Esq., went out of office by rotation, but Mr. Bleaden and Mr. Lund had offered themselves for re-election. In the room of Sir John Cowan, Bart., Mr. Ald. Musgrove (his successor in the ward) would be proposed, and in the room of Mr. Jackson, who had resigned, Mr. Ald. and Sheriff Hooper would be proposed by the directors. The several gentlemen on the committee who went out by rotation had also given notice of their intention to offer themselves for re-election. An auditor having resigned during the year, the name of Mr. A. Murray was submitted in his place.

On the motion of Mr. STENNETT, seconded by Mr. G. WALTER, the report was received with much satisfaction, and ordered to be entered on the minutes.

Charles Bleaden, Esq., and John Lund, Esq., were then re-elected.—Mr. Ald. Musgrove and Mr. Ald. and Sheriff Hooper were also elected directors.—Mr. Murray was elected an auditor, and the members of the committee who offered themselves were re-elected.—The usual dividend was then declared.

The CHAIRMAN stated that it was in contemplation to raise the dividend 1 per cent., for which purpose the accounts had been submitted to one of the most eminent accountants in the city, who, on inspection of them for the past seven years, had pronounced them to be most favourable for the purpose.

Thanks were then voted to the directors, committee, auditors, the actuary, secretary, and legal and medical officers of the society.

CHARLES BLEADEN, Esq., returned thanks for the directors, and D. W. WIRE, Esq., for the other officers of the society.—The meeting then adjourned.

BRITISH AMERICAN LAND COMPANY.

A special meeting of this company was held at the London Tavern, on Wednesday, the 22d instant, pursuant to an advertisement, to which it was stated, that the object of the meeting would be to fill up a vacancy in the direction, and also to consider the propriety of adopting the circular lately issued to emigrants by the directors.—The chair was taken by G. R. ROBINSON, Esq. (the governor of the company), who said, that having been requested by a list of twenty one proprietors to grant a special meeting, he had done so, though many of them had not sufficient shares to entitle them to sign a requisition; of this the directors did not take advantage, for, being at all times desirous of acting in harmony with the proprietors, they had convened the meeting, as if the requisition had been a proper one.—The SECRETARY (Mr. Gait) having read the advertisement, the CHAIRMAN said he dare say some of the gentlemen present would state under what circumstances the meeting had been summoned.—Upon this notice, Colonel Sir HENRY BAYLEY stated, that, being first on the list of requisitionists, he would at once declare that his object was to get more satisfactory information from the directors, as to the state of the company. He considered it essentially necessary to fill up the vacancy in the direction, as he had understood that all the acts of the directors became invalid, by the charter, from the time they neglected to fill up that vacancy to the present moment, which was one reason for his calling the meeting, as he considered it a neglect of duty on the part of the directors. The worthy proprietor having traced the fluctuations of the price of the shares, and the various acts of the directors, in regard to the lands in Canada, in an amicable tone, concluded a lengthened speech by moving that a committee of five shareholders should be appointed, to investigate the accounts of the company, and to report to the next general meeting.—This was seconded by Mr. JOHN WHITE, who, during the course of his speech, read a very insulting letter from a Mr. Rennie, who accused the directors of the most vile system of jobbing, but which was little less than ridiculed by the meeting. It appeared, however, that the letter was sealed, and opened at the meeting by Mr. White, who declared that he did not anticipate the scurrilous nature of the contents, or he would not have undertaken to read it to the proprietors.—The CHAIRMAN replied at length to the charges so unfairly brought by one whom Mr. White declared to be a comparative stranger, even to himself; and, as to the directors, they could only attribute such calumnies to the disappointment Mr. Rennie, no doubt, had met with, in not being appointed the company's agent at Glasgow, where they had already a very efficient and unpaid gentleman for their purposes. The chairman, in conclusion, put it to the meeting, whether, after the repeated votes of thanks passed to the directors, it was their wish that he should put the motion for a committee of investigation.—Col. Sir HENRY BAYLEY immediately agreed to withdraw his motion, as did also Mr. WHITE, the seconder, both repudiating any connection or participation in the expressions used by Mr. Rennie.—After some observations from Mr. Gillespie and Mr. Cummins (directors), and Mr. Clarke, Mr. Cooke, Mr. Anderton, Mr. Greenwood, and other proprietors, it was agreed by the chairman that more information ought to be given to the proprietors than had been done lately, which was through the want of a person, like Mr. Gait, at the company's office, but that it would be different in future.—Col. BAYLEY expressed himself satisfied, and Mr. BALDWIN, M.P., thought, if the report and accounts were printed and circulated amongst the proprietors, it would be all that was requisite.—The CHAIRMAN saw no reason to despair, for if the property of the company could be made immediately available, at only 4*s.* per share, it would return 3*l.* 10*s.* out of the 50*l.* 10*s.* the proprietors had paid on their shares.—A vote of thanks was then passed by acclamation to the chairman and directors, on the motion of Mr. CLARKE, seconded by Mr. WILD, when the meeting separated.

RAILWAYS IN FRANCE.—On the 1st of May next (the anniversary of the birth-day of his Majesty Louis Philippe) two of the projected lines of railway, it is expected, will be opened—one from Paris to Rouen, a distance of 92 miles to the north, and the other from Paris to Orleans, 73 miles south—which are both in that state of forwardness that no doubt is entertained of their being opened on that day. The whole of the projected lines in France have now been arranged for, and the sum of 125,000,000 francs have been voted by government for the purpose, of which sum 32,500,000*f.* have already been placed at the disposal of the Minister of Public Works, to be applied as follows:—For the line from Paris to Amiens (part of the line to the Belgian frontier), 8,000,000*f.*; the same line, the part between Strasburg and Hommecourt, 3,500,000*f.*; Paris to the Mediterranean, between Dijon and Chalon, 2,000,000*f.*; same line, between Avignon and Marseilles, 6,000,000*f.*; Paris to the Spanish frontier and the Atlantic, that part between Orleans and Tours, 6,000,000*f.*; Paris to centre of France, Orleans, and Vierzon, 3,500,000*f.*; and the remainder for continuing the surveys.

CALEDONIAN RAILWAY.—A prospectus of the projected railway from Lancaster to Carlisle, *viâ* Kendal and Penrith, has been recently published; the total cost of the line (seventy miles in length) has been estimated, after revised estimates by Messrs. Locke and Errington, at 1,600,000*l.* The object of the Caledonian Railway is to give increased facilities to the agricultural, commercial, and manufacturing interests of the district through which it is intended to pass, and to constitute the great channel of communication between England and the whole of Scotland. Of the capital, one-half will be furnished by the associated railway directors between London and Lancaster, on condition that a sum of not less than 200,000*l.* is subscribed by landowners and the public, and it is proposed to the prospectus to raise the latter sum by shares of 50*l.* each. The estimated traffic, allowing amply for every matter of expenditure, shows a net return of 14 per cent. per annum. The revenue from passengers, mails, and parcels, based on actual and authenticated returns, received by members of the *Grand Junction* and *Liverpool and Manchester Railway* directions, has been estimated at 60,000*l.* for N., and the goods' traffic at 40,000*l.* 17*s.* 8*d.*—giving a total net revenue of 88,941*l.* 9*s.* 10*d.* In the estimate no credit is taken for passengers in pigeons, and in horsebeck, nor is any allowance made for those passengers now by boats to Liverpool, from Scotland and the north of England, amounting at present to 47,000 per annum. Besides these, there are various other sources of revenue, such as coals sent down to Liverpool, and coal consumed on the line of Railway, which must certainly be diverted into the line, and which would have afforded ample returns upon a much greater sum than the estimate had been framed to meet the capital.—*Liverpool Chronicle.*

COAL MINING OPERATIONS—No. II.

CAUSES AND MEANS OF PREVENTION OF ACCIDENTS.

INFANT LABOUR IN MINES.

This part of the investigations of the committee has been entered into with the same humane anxiety to relieve the sufferings of the working miner, as the report all through exhibits; it is proved that a great source of danger in mines, arises from the employment of boys of a very early age, as trappers, frequently much under ten years, from which have arisen explosions and accidents of a very serious nature, several of which are related, the fault cannot reasonably be imputed to the poor children, ignorant of the consequences of their acts, cooped up alone in the silent darkness of the pit, for twelve hours, unrelieved from the monotony of their solitary employment, it is not to be surprised at, that the natural thoughtlessness and activity of their years should prevail, and that they should seek relief a little distance off with another imprisoned child, and leave their district exposed to all the consequences that now occur. It appears that for the chief air veins of mines, crossings are becoming more frequently employed, an arch air-duct, thrown over another passage at any angle, required to convey the current in another direction, prevents the so frequent employment of boys, and adds to the safety of the mine. These air-ducts would be much safer, if inclined drifts were cut in the solid stone, either above or below the level of the transverse passage, which would form so much stronger crossings, that should an explosion occur, they would not be blown out, as too commonly happens; in the accident at St. Hilda, in 1839, this circumstance was the cause of thirty deaths by after-damp. The committee recommend that in all cases, where they can possibly be obtained, careful, steady, and experienced old men, who are unfitted for active labour should be employed as trappers, particularly at important doors when they exist, the difference of expense of 3s. or 4s. per week, being too insignificant to admit as an objection, numerous miseries to families would be avoided, as well as the safety of these young and innocent victims secured. The report recommends that in no case should children under eleven or twelve years of age be employed, thus enabling their parents up to that period, to give them some little education, and, at that age, in most cases, the children have attained sufficient strength to withstand the labours of the mine, without physical injury; the committee would not not restrict the employment of children to a greater age than this, as it would tend to restrict the supply of labour, and if pitmen's sons turn their backs upon the mines, it must eventually much increase the expenses of working, as instances are very rare in which a boy, not originally connected with a mine, ventures upon the undertaking. Much to the credit of Napoleon, and to the disgrace of England, this matter was legislated upon by him thirty years ago, and is now the law in France, Belgium, and Italy, that no child under ten years of age be permitted to descend a mine, much less to work in them.

REGISTERED PLANS AND SECTIONS.

The want of a regular system of registration of plans and sections has been a great omission, and productive of the most serious accidents by inundation and otherwise. Twice in the Tyne district, within a few years, have old workings been penetrated, and upwards of eighty lives sacrificed by drowning and suffocation, and at Workington, in 1833, the Lady and Isabella Pits were similarly inundated, and four out of thirty lives destroyed; also the escape of gas from them, when too nearly approached, and the expense of boring and exploring drifts, when supposed to be in their vicinity, render the advantage of registered plans imperative. Some mines having been partially exhausted, and the most valuable seams worked by parties, having only a lease, they are shut up, and the coal lost to the country and the proprietors, till increased facilities present themselves, then they are again sought and re-opened; in many cases the locality is forgotten, and serious expense and much mischief incurred in the attempt, all which might be prevented by easy access to an official registered plan. It seems also necessary that the mineral riches of the kingdom should be known, not being like the surface products, continually renewable, but once exhausted, destroyed by superior competition, or rendered unavailable by extravagance and waste, can never be renewed, and will bring with it a fatal termination to her prospects and pre-eminence. Here, again, the continental states have the march of England, for in France, Italy, Hainault, and Belgium, laws for the registration of plans and workings of mines have continued amidst all the vicissitudes and changes in the dynasties of empires, to retain their force, so that every great mining country of Europe possesses a means of ascertaining the condition, extent, and progress of its mines, and mineral resources, except Great Britain, the most important of them all. The committee urgently recommend the adoption at each mine in every district in Britain, and consider that the official registration and arrangement could be easily, and conveniently, effected in the records of the Custos, or some similar officer, of each county, and the chief officer of each mine should be bound to transmit them with all their original and additional workings, and which should be open as a public document to all persons concerned; such a plan is the only one which can secure an organized system of mining.

SCIENTIFIC EDUCATION OF OFFICERS OF MINES.

Under this head the committee observe, with truth, that all the arts and manufactures possess the advantage of science in daily and intimate connection with all their branches and their minutest details, except that one most paramount to her prosperity—the mining interest—which appears to have been almost beyond the reach of her investigations. Hitherto the little science brought in to the assistance of the miner, has been left in the hands of those whose early years have been spent in the solitude and darkness of the mine, leaving but little opportunity of acquiring knowledge not immediately required in their daily duties, even in those of stronger minds than usual, and whose natural bend of genius tends towards scientific attainment. Thus the system of mining in this country opens an extensive field, both national and individually, for the beneficial application of science, and requires only to be brought into familiar intercourse to elicit the most valuable results. They express themselves deeply impressed with the great advantages derivable both to humanity and the mineral wealth of the kingdom, from bringing to bear the lights of science upon this subject, yet so imperfectly developed, and this is stated without derogation to the great practical talent of those men who are the present guides and directors of mines—several of whom, it is gratifying to know, are convinced of the necessity of the introduction amongst the officers of a more liberal system of scientific education, while other practical miners conceive, that turning a stream of science into the mines will prove injurious, by destroying a class of most meritorious men, whose experience, from almost infancy, is indispensable to their advantageous working, and for whom the substitution of even scientific and learned theorists, they conceive would be a very unbeneficial compensation; they trust, however, that early proofs of the advantages of science, will uproot these prejudices, and convince such parties that the object is not to deprive the miners of such experience, but to add to it knowledge, and to correct it by the enlightenment of scientific development. Even the occasional visits that science has paid to the mines, have been productive of the most striking effects. M. Jars, as early as 1760, a stove very few visits to the mines, read a paper to the Royal Academy of Paris, on, and laid down principles for, the correct ventilation of mines, which are, at this day, the great guides to British miners; Sir H. Davy, by one examination of a single mine, was led into a course of experiments, which terminated in the safety-lamp; and Professor Bischof, of Bonn, by his minute analysis of the inflammable gases of the German Mines, has been able to detect a considerable quantity of bicarburetted hydrogen (oilbant gas), which, from its explosibility at low temperatures, is of vast practical importance in the improvement and use of safety-lamps. Every one acquainted with the practical working of our mines, must of ours admit how little they have the benefit of such knowledge, except in some very few honourable instances, and from the experience obtained by the results of the continental schools, the advantages of a scientific education. Even barbarous Egypt, under the Government of a Turkish soldier, has a Polytechnic school, which, in 1838, had 235 pupils, who are taught industrial chemistry, mineralogy, geology, machines and management of mines, draining machines, furnaces and quarries, construction of models, &c., while Christian England, at the head of the civilization of the world, her material interests bound up in her mineral wealth and scientific knowledge, cannot boast of a single institution competent for such objects, or in the slightest degree comparable to that of Egypt. To the immortal honour of Sir Charles Lemon, he was the first in England to attempt the institution of such an establishment—in 1840, he proposed to endow a school in the most munificent manner, with a site for building, 500l. building fund, and not less than 10,000l. at his death; even this magnanimous offer was rejected by an absolute majority of the mining adventurers of the county of Cornwall, although the Duchy had consented to a tax on the produce of the mines, to aid in the proposal; and in December of that year, he announced his regret at their determination, and the consequent frustration of his great project, and Great Britain, the country of splendid national institutions, still leaves her miners, her most important interest, an exception to her care. They propose that before any viewer, or under viewer, could be legally employed in such extensive and responsible situations, they should be specially educated for their profession, and they consider that a competent knowledge of the following branches of study are indispensable:—mathematics, practical surveying, mechanics, hydraulics and hydrostatics, pneumatics, chemistry, mineralogy, metallurgy, and geology, and to complete this professional education by a course of practical engineering and mining in some flourishing locality in the heart of a mining district. A valuable institution already exists in the north, which, by being somewhat extended, and legally sustained, would complete this consideration. The University of Durham, by having been the first to establish a class of civil engineering and mining, has given proof of its anxiety to supply an acknowledged deficiency in the system of general education, and is still willing to co-operate further, in order to effect an extension of its plans, and the committee consider that this University offers peculiar facilities for the attainment of this important object. For the profession of an engineer of mines, the committee deem it necessary that a sufficient course of study of the inferior-named sciences should be established at all the universities; the professional education to be completed by a course of practical mining and engineering at the University of Durham, whose certificate should be imperatively necessary before permission be obtained to assume so responsible a situation. Thus would mining be elevated to a certain scientific profession, with all the appliances of the existing knowledge and experience of the day, instead of the rude, uncertain, unsystematic, and dangerous art, which it now is, and the Parliamentary vote of 2000l. or 3000l. per annum, which would be necessary to carry out this recommendation, can never be deemed too much, in a humane and civilised country like Britain; for the development of her mining resources, and the protection from fearful disasters of a large and useful section of her people.

[To be continued in our next.]

MINING CORRESPONDENCE.

ENGLISH MINES.

HOLMBUSH MINING COMPANY.

Feb. 21.—The lode in the 110 fathom level west is ten inches wide, and worth 9*l.* per fathom. In the 100 fathom level west the lode is eight inches wide, and worth 5*l.* per fathom; at this level east there is no improvement; in the cross-cut towards the Flapjack lode, at this level, the ground is much the same as last reported. The lode in the stopes, in the back of the 100 fathom level, is sixteen inches wide, and worth 26*l.* per fathom. The seventy, eighty, and ninety fathom levels, west of Hitchins's shaft, are still progressing towards the lode. The winze sinking below the ninety fathom level is communicated to the 100 fathom level below; in the back of the ninety fathom level the lode in the eastern stopes is twenty inches wide, and worth 35*l.* per fathom; in the middle stopes the lode is two feet wide, and worth 46*l.* per fathom; and in the western stopes the lode is two feet wide, and worth 40*l.* per fathom. In the eighty fathom level east the lode is sixteen inches wide, and producing stones of ore; the ground at the cross-cut, at this level, towards the north lode, is favourable for driving; the lode in the stopes, in the back of ditto, is eighteen inches wide, and worth 30*l.* per fathom. In the sixty-two fathom level, both east and west, the lode is small and unproductive; in the deep adit east the lode is two feet wide, composed of copel, spar, and mundic. The pitches are much the same. J. Phillips.

BEDFORD UNITED MINING COMPANY.

Feb. 21.—I have but a few lines to hand you this week; at Wheal Marquis, at the forty fathom level east, the lode is still about two feet wide, composed of spar, mundic, and spots of copper ore. In the new engine-shaft there has been no lode taken down since last report, the men having been engaged in the arrangement of necessary pitwork, &c. We expect to get our machinery in operation by the latter end of this week. J. Phillips.

TRELEIGH CONSOLS MINING COMPANY.

Feb. 18.—The eighty, east of Christoe, is one foot wide, and producing good stones of ore. At the seventy west we are rising in the back of the level; the lode is worth 5*l.* per fathom. The sixty west is four feet wide; we have some very good stones of ore from this lode, and hope for an improvement shortly. The fifty west is about ten inches wide, with some ore. At Good Fortune the fifty west is two feet wide; in a few fathoms driving we expect to get under the ore ground driven through in the level above. The winze from the thirty-four to the forty-four fathom level being holed, the men will resume driving both these ends west. W. Symons.

WEST WHEAL JEWEL MINING ASSOCIATION.

Feb. 20.—The eighty-five cross-cut is a little more favourable for driving. The seventy east, on the south branch, is much improved in the past week; it is now worth 8*l.* per fathom—this lode is composed of strong yellow ore; the seventy east, on Wheal Jewel lode, is worth 15*l.* per fathom, and the stopes in the back are worth 18*l.* per fathom; this level west is suspended for a month, while we hole a winze from the level above. The winze in the bottom of the fifty-seven east is worth 18*l.* per fathom. The winze in the bottom of the fifty-seven east, on the south branch, is worth 7*l.* per fathom. No alteration in any other place. S. Lean.

UNITED HILLS MINING COMPANY.

Feb. 21.—At the seventy fathom level, in the eastern end, the lode is four and a half feet wide, two and a half feet ore of fair quality; in the western end no alteration since last week. At the sixty fathom level, in the eastern end, the lode is four feet wide, eighteen inches on the north producing ore; in the western end the lode is five feet wide, grey throughout, but rather of a low quality. At the fifty fathom level the lode is four feet wide, three feet good ore. At James's shaft the lode is two and a half feet wide, one foot good ore. At the forty fathom level the lode is two and a half feet wide, producing some ore, but not rich. At the adit, west of Wheal Sparrow, the lode is three feet wide, one foot on the north part ore of fair quality. Sampled today 430 tons of ore, 47 of which is from Wheal Sparrow.

W. Richards. N. Langdon. S. H. Pearse.

TINCROFT MINING COMPANY.

Feb. 20.—We are now in course of sinking the new engine-shaft below the sixty fathom level, by eight compmen and four men, at wages. The lode in bottom of said shaft is two feet wide, grey, but not rich, worth 10*l.* or 15*l.* per fathom, and very promising. The lode in the sixty east is two feet wide, worth 15*l.* per fathom. The west end, same level, is producing ores of inferior quality; this end is very near a cross-course, beyond which, in the fifty fathom level, the lode is very much improved, on which we have driven nine fathoms (to the west of said cross-course), and have still a good lode in the end, worth 30*l.* per fathom. The stopes in the back of this level continue good, worth 40*l.* per fathom. The stopes in the back of the sixty fathom level continue to be worth 20*l.* per fathom. The fifty fathom level end to east of eastern cross-course, has a more kindly appearance now than ever it has had before. The lode in the forty end west is twenty inches wide, worth 16*l.* per fathom. The thirty end, west of North Tincroft shaft, has rather improved in the past week, now worth 7*l.* per fathom. The winze in the bottom of the fifty, to the west of the shaft, has been sunk nine feet, but no lode taken down as yet. Our pitches in general are looking well. Palmer's shaft is still being sunk in ironstone—a strata quite congenial for copper ore, but it very much impedes our progress in sinking. The lode in the fifty five, west of the above-named shaft, is about eighteen inches wide, yielding some good ore; this level is laying open ground that will work at moderate tribute. We find the lode in the bottom of the level to be better for ores than the back. The lode in the winze, sinking under the fifty-five, is two feet wide, six inches good ore towards the west end of the winze; we cannot expect to raise much ore in this part of the mine for some time, but we are opening tribute ground, which will be available by-and-bye. We are again taking out the water in the south mine, below the eighty ore fathom level; I shall soon be able to work on the lode recently discovered at that level to great advantage. The seventy-two end continues to yield fair quality tin stuff, with some copper ore. The pitch in the back of the seventy-two continues very good. On the whole, I am glad to say, our prospects are very encouraging.

William Paul.

TREGULLAN MINING COMPANY.

Feb. 20.—The lode in the engine-shaft is still in the solid rock, composed principally of copel and spar, but unproductive. The lode in the fifty fathom level east is much the same as last reported, producing a little ore. The lode, in extending the forty fathom level east, is principally composed of soft spar, with a very kindly appearance, producing some black and grey ores. The tribute pitches are much the same. J. Nibbis.

CONSOLIDATED TREFOIL MINING COMPANY.

Feb. 20.—The lode in Heywood's shaft, sinking under the forty fathom level, is twenty inches wide—tribute ground. The lode in the forty fathom level, east of Heywood's shaft, is two feet wide—very good tribute ground. The Blind Will's lode, at the adit level, west of Morcom's shaft, is one foot wide, producing a small quantity of ore. The tin lode in the back of the adit level, east of Morcom's shaft, is much as last reported.

H. Williams. J. Morcom.

TAMAR SILVER-LEAD MINING COMPANY.

Feb. 20.—In the 130 fathom level the lode is about nine inches wide, composed of copel, mundic, and a small quantity of silver-lead ores. In the 120 fathom level we have not broken any lode since my last report. In the 110 fathom level the lode is three feet big, producing some ore, but at present not rich. In the 100 fathom level the lode is from eighteen inches to two feet wide, composed of copel, bunt spar, and silver-lead ores. In the ninety-five fathom level the lode is two feet wide, producing good work. In the eighty-five fathom level the lode is three feet in width, chiefly composed of copel, with a small quantity of ore. In the seventy-five fathom level the lode is one foot wide, producing some good work. In the sixty-five fathom level the lode is one foot wide, producing a little ore. In the fifty-five fathom level the lode is about the same width, rather poor. In the forty-five fathom level the lode is small, and rather unproductive at present. In the thirty-five fathom level the lode is two feet wide, one foot of which is saving work. On Monday next we shall sample two parcels of rich silver-lead ores, which we expect will be almost eighty-five tons. At the north mine the ground is more favourable for sinking, and we expect to be down to the thirty fathom level in about a fortnight or three weeks. J. Penaluna.

FOREIGN MINES.

ST. JOHN DEL REY MINING COMPANY.

Morro Velho, Nov. 6.—Produce for November, 6266 mils. 36 grs., equal to 79 lbs. 1 oz. 4 dwts. 4 grs.; from the stamps, 6197 mils. 36 grs.; from the amalgam, 69 mils. 00 grs.; quantity of ore stamped, good 3 tons; produce per ton, 4·005 mils. Mine Report.—Four stopes have been worked in the Velho during the month. The Gandu comp and workings will, for the future, be worked much smaller, thus raising the produce per ton, and diminishing the cost on this mine. The East Continent, or Lenine, continues to show a fine lode; it will be worked to more advantage when we can manage to get the pumps in, and have a new comp shaft for this mine. Cost for November, 18,183 reis. 360. I think the average cost in a few months will be about 16,000 reis. Arrastre.—The arrastre in our hands is a decided failure. Of the present coming sand from the stamps, Barrett concentrated a considerable quantity, and the result gave a sand very rich in pyrites and gold, as Barrett's sand; this sand yielded 2½ ozts. of gold to a ton of concentrated sand. I have adopted a process to endeavour to catch the finest particles of gold, very slow is its operation, but all to no purpose; I will send you some to all its stages that you may have it assayed. I have Mr. Leny's reports before me, and have seen the gold he obtained, and I am more inclined to believe myself unskilful than him in error, as regards the produce per ton, but I think he overrated the power of an arrastre, when he calculated it would grind three tons in twenty-four hours, and grind it well; this consideration is sufficient to settle the question. Our tyres from the stamps will yield 2 ozts. per ton, equal to 3 ozts. per diem, quite sufficient to pay, and give a profit, but below our anticipations. As soon as possible, I shall, therefore, not hesitate to convert the arrastre wheel into a stamping wheel to work twelve heads.

C. Herring.

ALTEN MINING ASSOCIATION.

Rapas.—No. 1 bargain is a new roof stope in the ten fathom level; the lode appears promising, being upwards of two feet wide, composed of lime, with ruby and yellow ores. No. 2—A new stope at the bottom of shaft No. 1, on a very fine part of the lode, lately broken through; it appears four to five feet in breadth, forming rich squats, or bunches, of yellow or ruby ores, with heavy spar and lime; the yellow ore, which is of a very compact character, predominates. No. 3 is the same bargain as No. 2 in the December settings, and is situated a little above the present No. 2. The lode is about three feet broad, composed as above, and with ore of the same character. No. 4—The lode is about three feet wide, chiefly lime, with ruby and yellow ores intermixed. No. 5—Upper stope, in shaft No. 1, still preserves its promising character, is about eighteen inches broad, heavy spar, with rich bunches of yellow and ruby ores. No. 6—Level from shallow adit proving ground; towards the latter end of the month another very promising lode was cut, of a regular character, full three feet wide, containing rich squats of the finest ruby ore; the matrix, however, was a disintegrating yellow mass, containing, by assay, about 3 per cent. The squats of the compact ore is of the very richest quality. As the lode was only recently cut through, I cannot, therefore, venture to predict what it is likely to make—probably, as the matrix is mass is so rich, when it becomes consolidated it may form a productive lode. No. 7 is on one of the new lodes cut by the above level; is likewise a large gossany lode, fully four feet wide, similar in character to the one just cut, and running parallel with it. The total produce of the month will have been 30½ fathoms productive ground, averaging 9·8 tons per fathom, or 0·450 tons copper. The winze, as advised in our last, is at present coarse, with occasional rich squats of copper pyrites; the whole mass, taking it as broken, without sorting or picking, is estimated at 2½ per cent., and will serve, if required, in that state, as an admirable flux. Wilson's Lode—I dare not venture to offer any speculative opinion as to the eventual value of this discovery, although the lodes explored are of such a regular and decisive character, with such a stamp of reality and permanency, as fully to warrant any expectation we might hold out; still, as but very partial reserves have as yet been created, I shall be cautioned with giving you as correct a description of the present appearance as I am able. At present there are two very distinct parallel lodes, which, for brevity's sake, we have called the north and south lodes. The first is the one discovered and worked upon when Mr. Woodfall was here; it is formed of two smaller lodes, which united at the point we were then opening; to the eastward they diverge from each other at an angle of about 15 degrees, and vary in size each from six to twelve inches, containing good ores; to the westward they have united, and owned a well-defined lode, fully four feet wide, composed of quartz and limestone, with squats of very rich copper pyrites, and having every appearance of becoming a permanent and productive lode. We have two bargains set this month, of two men in one and four in the other. The first is on one of the branches diverging to the eastward, the second is on the junction going to the westward. As this part of the lode dips at the same angle as the surface contour of the mountain, and as our workings are only three fathoms deep, we may expect the country to bear down; it is our intention then to sink on the lode following the dip of the country above.

The next, or south lode, presents one of the most promising appearances, with the exception of Rapas, seen since the formation of the association; the lode is of the most defined and distinct character, fully four feet broad, composed of quartz and fine richly blended with copper pyrites, producing from three to four tons per fathom. The level which is now driven for about four fathoms in length, upwards of three fathoms from the surface, has been uniformly productive the whole length; about fifteen fathoms further to the eastward, on the inclined slope of the hill, we drove in a libby with a view of cutting the lode at the most convenient point; towards the end of last month, we were fortunate enough to meet with it, bearing all the characteristics of the lode in the level, both in size, regularity, and productiveness; that a space of fifteen fathoms in length, and two and a half to three in height, is already secured; we have now set three bargains on this lode—the western level, in order to extend the length, and two winzes, on the two extremities of the ground, already discovered; the winzes are at the lowest depth from the surface, and have a space of about fourteen fathoms between each other; thus every fathom sunk, will be proving and forming fifteen fathoms of reserve. As it is probable we may be inconvenienced with water as we get down, as no level can be brought in before the summer, we have resumed the old cross-cut, or adit, which will serve in the meantime, and intersect any other lodes that may run between, as several indications of gossan have been seen on the surface. We have built a smithy, and have commenced an adit in the ground some fathoms below, where a lode was traced in summer, which we expect will cut both the north and south lodes; nineteen fathoms of ground were expended during the last month, producing four tons to the fathom. We have, in consequence of the increased and productive workings here, removed our people from the old mine and Mithell's, those workings will not, therefore, be resumed during the winter.

MINING NOTICES.

Mount Vernon Mining Company.—The directors of this company have remodelled their deed, reduced the number of shares to 2400, one moiety of which is held by Messrs. Burger and Brow, and the other moiety by the present shareholders, and will proceed to work the mine by monthly calls upon the shareholders. A general meeting of the proprietors is to take place this day fortnight, to confirm what was agreed to at the meeting yesterday.—*Jamaica paper, Jan. 15.*

Mining in Turkey.—The Turkish Government is directing its attention towards mining. Some Prussian engineers have, for a considerable time, been employed in the copper mines of Tokat. It is said that silver has been discovered in the same mines.

Variegated Marble.—A bed of variegated marble has been discovered whilst working a Kentstone quarry, belonging to George Pyne, Esq., of Middleton Tyas, near Richmond. A small part has been dressed by a skilful workman, and the polish is beautiful.—*Durham Advertiser.*

Cambrian Iron and Spelter Company.—The 1000 shares in this company, advertised for sale, by auction, by Mr. Whittington, in our last Journal, were, we understand, bought in.—A like result attended the offer of harbour bonds.

Plymouth Iron Works.—Amidst so much news respecting the depression of the iron trade, it is truly cheering to report that a furnace is about being put in blast at Plymouth Iron-Works. We hope it is correct; but, on the other hand, it is declared that many underground workmen will be discharged in the course of a few weeks.—*Silurian.*

MINE ACCIDENTS.

WEST CARADON MINE—AWFUL OCCURRENCE.

TO THE EDITOR OF THE MINING JOURNAL.

Sir,—Miners are exposed to various deaths, but I think you never had to record a similar case to the following:—On Tuesday last a young man, named Thomas Lemerton, was working at the surface of West Caradon Mine, near the landed extremity of the balance bob of the steam-engine. The engine had returned the stroke, or, as miners' say, was "out of doors;" and, as she was working slowly, the last end of the balance-beam, in which were many tons of stone, was, consequently, at rest, and elevated high enough from the ground to admit of a man passing under it. Poor Lemerton was at work close to the bob, and, as the road was confined, he stepped back, unintentionally, a step or two, to make room for some men who were passing that way. The moment he got under the beam, the engine took her stroke! From what has been already stated, your mining readers will anticipate, and shudder at the consequences, especially when they are told that the bottom of the bob came in contact with the ground every stroke. The only sound heard was the crash and crush of the brains and frame of poor Lemerton, who, in less than one moment, became a breathless, shapeless mass. You may, probably, consider a benefit to society by giving publicity to the melancholy circumstance, by warning others to be on their guard in such cases, and especially to the conductors of mines, by directing that all those dangerous places should be fenced off and secured wherever it is practicable.

Callington, Feb. 16. John Brown.

Fatal Case in Cornwall.—On the 17th inst., Benjamin Chynoweth was crushed to death by the stamps' engine. Nothing witnessed the accident, but, from appearances, it is thought he (after caught in the cogs, and he was then drawn in among the wheels; his body was found to the pass, turned the handle, and had it remained undiscovered much longer, it would have been reduced to almost, and washed away with the tin stuff.

Accident on the Hartlepool Rail-Way.—On the 19th inst., Mr. Joseph Hamilton, a respectable farmer, while superintending the raising some stones from a quarry, imprudently stood beneath a very unsafe projection of rock, and which, giving way, suddenly crushed him to death.

SMOKE NUISANCE.—ECONOMY OF FUEL WITHOUT the NUISANCE from SMOKE, by C. W. WILLIAMS'S ARGAND FURNACE.—The principle of this furnace consists in the mode by which the air is introduced to the gaseous matter evolved from coal, whereby a more perfect combustion of the constituents is effected, the process being conducted on true chemical principles, as explained by Mr. Williams, in his *Treatise on the Combustion of Coal*. A furnace, constructed on this principle may, by permission, be daily seen in action at the Water-works, Soho street, and Manchester Railway Station, Edge-hill, Liverpool.

For further information, apply to Dirkin and Co., agents, 5, Town-hall-buildings, Cross-street, Manchester.

CAUTION.—SMOKE PREVENTION.—Mr. JOSEPH WILLIAMS.—The public have already been CAUTIONED, by the ADVERTISEMENT OF DIRCKS and CO. (*see the Mining Journal, the Albion*, and other Liverpool papers), AGAINST the IMPOSITIONS PRACTISED by Mr. JOSEPH WILLIAMS, of this town, who, having no patent of his own, has, under colour of applying the patent of Mr. Kurtz, been introducing MODIFICATIONS and IMPROVEMENTS of the PATENT of Mr. C. W. WILLIAMS, for the MODE OF INTRODUCING AIR to FURNACES and the PREVENTION of SMOKE.

In his late advertisement (*see the Mining Journal*, and the *Mercury* of the 31st December), Mr. Joseph Williams states as follows: "That he is the acting proprietor of Mr. Kurtz's patent; and that fact, that the patent is the smoke consumer which he declares it to be, was acknowledged by Mr. Andrew Kurtz himself on board the *Urgent*." To this allegation Mr. C. Williams states, on the authority of Mr. Kurtz himself, that that gentleman was asked to go on board the *Urgent*, the object being, artfully, to convey an impression that Mr. Kurtz was connected with what was done to the furnaces of that vessel, and sanctioned the same; that Mr. Kurtz was then, for the first time, informed of what was done on board the *Urgent*, under Mr. Joseph Williams's directions, and of the apparatus behind the furnace bridges for regulating the size of the orifice through which the air is admitted, and that he (Mr. Kurtz) at once disavowed the same, as not forming any part of his patent; that the plan adopted in the *Urgent*, as regards the utensils of the fire bars, was also subsequently altered—thus departing still further from Mr. Kurtz's patent; and that, so far from the plan or apparatus so adopted by Mr. Joseph Williams being "acknowledged by Mr Kurtz," such assertion is not only false, but directly the reverse of the fact.

It is hereby further stated, that the mode of admitting the air adopted by Mr. J. Williams, and by which he attempted to deceive the Admiralty and the public, under pretence of its being the patent of Mr Kurtz, is no way conformable to that patent, and that neither Mr. Joseph Williams, nor any one connected with him, has a patent for the same, such being a direct infringement of Mr. C. W. Williams's patent. Liverpool, Jan. 7.

SMOKE.—The following remarks on RODDA'S PLAN were made at the meeting of the Leeds Sewers Committee, held Jan. 20, 1843:—

The Rev. J. A. Ra was said, that if the morning would permit him, he would mention what plans he knew to be very effectual. He had been for years annoyed at his residence at Meltham by the smoke arising from the mill of Messrs. Rennie and Co., at that place. He had remonstrated with them on the subject, but, being the owner of a mill himself, he thought it best to try to prevent any in his own mill, in order that, if he succeeded, he might have good grounds for his remonstrance with Messrs. Rennie and Co. The mill of which he was the owner was that of Messrs. Walker, at Lidget; and at it Mr. Rodda was employed. And he has since seen that gentleman's plan in full operation there, and had examined it closely, and certainly the opportunities had been put up to his (Mr. Rhodes's) entire satisfaction, and was quite effective in preventing smoke.—Mr. Hodgson had Rodda's plan in use for six months, and he could testify to its good effects.

Mr. He powers said that he had found Rodda's better than five or six other plans that he had tried. He had persevered in the use of Rodda's apparatus, which prevented smoke, effected a saving in the fuel, and had other advantages—as it has raising the steam quickly, and keeping it at a regular height with very little attention on the part of the fireman. As soon as ever smoke was generated, the apparatus produced masses of destructive fire, and the only time when there was smoke was when fresh coals were thrown on the fire, and then there was not much smoke, and that was not visible more than half a minute. The coals he was using were outlidded slack, which he found to answer very well, and his mill was quite free from smoke. He believed that Mr. Rodda's plan was applicable to dye-house pans and to all sorts of furnaces except to the reducing (Brunton's) grates.

Mr. Atkinson inquired if any plan that was known could prevent a large quantity of smoke being emitted when a fire was first lighted?—Mr. Hodgson replied that Mr. Rodda's did to a great extent.

Mr. Lockwood said that Messrs. Pease and Heaton, and also Mr. George, had applied Rodda's plan to their dye pans, and found it to answer exceedingly well.—Mr. Hodgson had seen the plan in operation at Messrs. Pease and Heaton's, and he could testify that it was quite effective. It was only when Mr. Rodda's instructions were not obeyed that smoke was generated. With regard to the best means of ensuring attention on the part of firemen, Mr. Heudforth stated how he did with his men. He went to the firemen and said, when the plan was to effective operation, "Now, you see there is no smoke and you are. If the apparatus is properly attended to, there will be no smoke." "Yes," said the man. "Well, then," replied Mr. Heudforth, "take notice and remember, that if I see any smoke coming out of the top of the chimney you must take the sack a month's notice to quit." This he found had the effect of making the men attentive to his duties; and if he managed well, and to his (Mr. Heudforth's) satisfaction, he occasionally gave him a little reward.

R. RODDA is now in **LEEDS**, and begs to inform the **PROPRIETORS** of **STEAM ENGINES**, &c., in Yorkshire, Lancashire, and elsewhere, that he has **REDUCED HIS PRICE**, and is also furnished with numerous testimonials as to the perfect success of his plan for **CONSUMING SMOKE** and **SAVING FUEL**.—Communications addressed to 11, Briggate, Leeds, attended to immediately.

WRIGHT'S PATENT DRAG.—The use of a drag to carriages being admitted, parties wishing for safety and relief to their horses have now an opportunity of having one on the most important principle, such as has never been offered to the public before, the carriage being shifted or released at pressure by the person driving, without leaving his seat or stopping the vehicle. All who are in the habit of driving must see the great benefit obtained from assembling the wheel before reaching the bottom of a hill, as that, if another is to be ascended, the velocity shall not be impeded, a heavy time is saved and the horses relieved from the drag bill, as well as the danger avoided in backing the carriage, which must be done under any other system. In leisure the mind. An obvious saving is also effected, the great wear under all former plans being when the skid is not required, yet cannot be released.—WRIGHT'S PATENT DRAG has now been in USE for the last TWO YEARS, being FIXED to the "ROCKET" VENTNOR COACH, travelling daily on one of the most hilly roads in the Isle of Wight, the journey from Ryde to Ventnor, thirty miles, being performed in two hours, by half an hour, less by the former mode of skidding, with much greater ease to the horses, and to the satisfaction of the proprietors, as shown by their testimonial. It can be applied without regard to the pole, in case of accident, as may be accomplished by a child ten years of age. Parties may be supplied with the apparatus, complete, on applying at the office of the proprietor, 12, Church-street, Ryde, London.

Jan. 14. All letters pre-paid.

TO THE PROPRIETOR OF WRIGHT'S PATENT DRAG.

Royal Pier Hotel, Ryde, July 19, 1842.

SIR,—Having had your drag in use on the *Rocket* coach, running daily from Newport to this place and Ventnor, and back, once one or the other little route in the Isle of Wight, during the last two seasons, we deplore our satisfaction to be enabled to state, affording a great relief to the horses, and a saving of time, full half an hour, between Ryde and Ventnor (a distance of thirteen miles, and the easiest your drag, when known, will be generally entered. We are, &c.,

GEORGE RENDALL,
WILLIAM LAMBERT (Coachmen,
JOHN WHITCOMBE (Coachmen) } Proprietors

COMPOSITIONS FOR WRITING WITH STEEL PENS.—STEPHENS'S WRITING FLUIDS.—These compositions, which have so extraordinarily EXTENDED THE USE of the STEEL PEN, are brought to very great perfection, being more easy to write with, more durable, and in every respect preferable to the ordinary ink. Its warm climates they have become essential.

FOUR CONSIST OF

A blue fluid changing into an intense black colour.
A patent anchorographic true fluid, remaining a deep blue colour.
A superior black ink of the common character, but more fluid.
A bottle of carmine red for ornamental writing.

A hydrochlorate transparent ink, anchorographic by any chemical agent.

Also a new marking ink for linen, and indelible stamps for preventing ink from evaporation and dust.

Before all of each, convenient for writing from, are procured, which will enable those who may wish to try either of these articles, to do so at a cost of sixpence.—Prior to inquiring for the blue fluids should be particular to use the terms, "Under the Blue Fluids," or "Blue Black," whichever they may require.

N.B.—Black ink and both of the above articles are constantly being examined as new discoveries, but, on examination, they will be found to have only some new name.

Prepared by HENRY STEPHENS, the inventor, 14, Bradford street, Blackfriars road, London, and sold by stationers and books-lers.

The exchangeables time fluids are patent articles; the public are, therefore, cautioned against imitation, which are infringements, to sell or use which is illegal.

STEPHENS'S SELECT STEEL PENS.

The utmost possible care having been bestowed upon the manufacture of these articles, so as to procure the highest finish, they can be confidently recommended, both for durability and elasticity.

MAGNETO-PLATING.—The FIRST DESCRIPTION of this new art, invented and patented by Mr. Woodcock, of Birmingham, is contained in the *MECHANICS' MAGAZINE* of the 28th inst. (No. 1021), price 3d.; and in the scientific part (on March, price 1s. 6d., which part will contain also memoranda of all the most important patents specifically during the past month.—Reviews of the "South Wilts Report on Mine Accounts," Jubert on Steam Boiler Explosions, and Dr. Lardner's book of Mr. Babbage; Wright's Lectures, and other papers, on that new Steamers of the late Samuel Hammond, Esq., Peter Ewart, Esq., and Charles Cottrell, Esq., and numerous other papers and communications of scientific interest and importance.

Mechanics' Magazine and Patent Office, 166, Fleet street.

NEW ROYAL EXCHANGE.—THE ARCHITECT, ENGINEER, AND SURVEYOR, No. 5, will be published on Tuesday next, and will contain a Description of Mr. Tite's Design for the new Royal Exchange, illustrated with a splendid Engraving of the same. It will also contain a valuable Report on Architectural Drawings, from Messrs. Grissell, the Firm of Inspectors of Architectural Competition Arrangements.—Monuments to Dean of Chichester.—The Engineering Works of the Eastern Counties Railway Company.—Amateurs Visited.—Provincial Societies' Lectures.—On Railway Accidents.—Mr. Cheverton and the Europeans.—Institution of Civil Engineers.—&c., &c.

London: James Gilbert, 49, Pancras-row, and all booksellers.

ANTHRACITE IRON.—CRANE'S PATENT.—TERMS FOR LICENSES FOR SMELTING IRON,

BY THE COMBINATION OF ANTHRACITE AND HEATED AIR, MAY BE HAD BY APPLICATION TO THE SOLICITORS OF THE PATENTEE, Messrs. WATKINS AND HOOPER, 11, SACKVILLE-STREET, LONDON.

By the use of this process, it is believed that the whole of the veins of anthracite in the South Welsh Basin, amounting in the aggregate to 314 feet in thickness, are applicable to the purpose; all those above, and including the Ina a vein being nearly 40 feet of the whole, have been successfully used by the patentee, at the Ynis-edwyn Iron Works, near Swansea.

The consumption of anthracite in the smelting process, has varied from 27 to 34 cwt. per ton of iron, according to the vein in use.

To heat the blast, the average consumption has been from 7 to 9 cwt of inferior coal and culm.

With respect to the strength of HOT-BLAST Anthracite Iron, the public are referred to the short-hand writer's report of the evidence given on the trial in the Common Pleas, Feb. 11, 1842, in the cause, "Crane v. Price,"

Folio 85.—Mr. David Mushet deposed, that he had taken a similar series of bars to those described and made use of by Mr. Truscott, for which see his work upon the subject; the same sized bars of remelted COLD-BLAST CAST-IRON, which would only support 73 lbs., required 2 91 lbs. to break them, when cast with remelted HOT-BLAST ANTHRACITE IRON.

Folios 77 and 78.—Mr. George Cottam stated in his evidence, that, with bars four feet between the supports, and one inch square, the following had been the result of his experiments:—

Remelted COLD-BLAST IRON broke at 430 lbs. to 445 lbs.

Remelted HOT-BLAST ANTHRACITE IRON broke at 580 lbs.

—*Vide* Mr. G. Cottam's evidence likewise with respect to the extraordinary flexibility of hot-blast anthracite iron, in the same document.

The last experiment tried at the Ynisedwyn Iron-Works, which was in October of the present year, with 1-inch bars, 4ft. 6in. between the supports, cast directly from the hot-blast anthracite furnace No. 1 gave the following breaking weights—Lbs. 647, 710, 651, 662, 644, 757, 650, 697—mean, 6744 lbs.

Ynisedwyn Iron-Works,
Swansea Valley, November 24, 1842.

COLD BLAST ANTHRACITE PIG-IRON.—Mr. D. MUSHET, the author of the celebrated Treatise on the "Manufacture of Iron and Steel," who has made a series of most elaborate experiments on this extraordinary iron, in concluding remarks:—"From these, and the former comparative experiments, it is abundantly evident, that the pig iron now making, with cold blast and anthracite, at the Ystalyfera Iron-Works greatly exceeds in strength, in defective covers, and capacity to resist impact, any iron at this time manufactured in the United Kingdom."

Ystalyfera Iron Works, Swansea.

TAFF VALE RAILWAY.—WANTED, an intelligent, active person as SECRETARY to the TAFF VALE RAILWAY COMPANY.—Applications are requested to be made by letter, addressed to "The Chairman of the Board of Directors, Cardiff," prior to the 14th of March, stating former occupation, and salary required.

SHEFFIELD, ASHTON-UNDER-LYNE, & MANCHESTER RAILWAY.—TENDERS FOR LOANS.—The directors are prepared to GRANT MORTGAGES, under the powers of their Act of Parliament, FOR LOANS OF MONEY, in sums of not less than £ on each, and for periods of three, five, or seven years, at the option of the lender.—Interest, at the rate of 5 per cent. per annum, will be paid half-yearly, for which interest warrants will be given for the period agreed on, payable at the company's bankers in London, Manchester, or Sheffield.

Further information may be obtained of the company's offices in Manchester or Sheffield; at the office of T. J. Parker, Esq., Sheffield; Messrs. Bagshaw and Stevenson, Manchester; or Messrs. Johnson, Son, and Wetherall, Temple, London.

Manchester, Feb. 15. By order, J. PLATFORD, Secretary.

BRISTOL AND EXETER RAILWAY.—CONTRACT FOR WORKS.—Notice is hereby given, that the directors of this company will RECEIVE, on Friday, the 17th of March, at their office, in Broad street, Bristol, TENDERS for the execution of the following WORKS:—

CONTRACT, No. 4 E.

The formation of the railway, and the execution of all works connected therewith, except the laying of the permanent way, of that portion of the line extending eastwards from the northern boundary of field No. 3 A, in the parish of Cullompton, to chain stake, 84 miles 40 chains, in the parish of Broadclist, a distance of about 1 mile 80 chains.

CONTRACT, No. 4 E.

The formation of the railway, and the execution of all works connected therewith, except the laying of the permanent way, of that portion of the line extending southwards from the chain stake, or mile 79 chains, in the parish of Broadclist, to the northern boundary of field No. 69, in the parish of Silverton, a distance of about 1 miles 4 chains.

CONTRACT, No. 5 E.

The formation of the railway, and the execution of all works connected therewith, except the laying of the permanent way, of that portion of the line extending southwards from the chain stake, or miles 49 chains, in the parish of Broadclist, to the boundary room between fields Nos. 19 and 21, in the parish of Stoke Canon, a distance of about 1 mile 20 chains.

Notice posts, showing the commencement and the termination of each contract, are on the ground.

Drawings and specifications of the above works will be exhibited at the engineer's office, in Temple Meads, Bristol; and printed forms of tender may be had at the same office, or at the company's office, in Broad street, after Monday, the 27th of February.—The directors do not consider themselves bound to accept the lowest tender; and they expect the parties to attend at the office, in Broad street, Bristol, at Twelve o'clock, on the 17th of March. By order of the directors,

Office, 30, Broad street, Bristol, Feb. 17. J. B. BADHAM, Secretary.

MUTUAL LIFE ASSURANCE SOCIETY,
ESTABLISHED 1834—37, OLD JEWRY.

At a General Meeting of the members of this society, holden the 14th of January last, the accounts of the society were presented, made up to the 31st of December, 1842, and a bonus, by way of addition to the sum assured, was declared on all policies in the society on which two premiums had been paid.

The bonus, on an average, amounts to 40 per cent. on the premiums actually paid.—The following is a specimen of the additions actually made to the nine policies first granted by the society:—

Policy No.	Sum Assured	Premiums.	Admission Ago	Additions.	The addition amounts to the following rates per cent. on the amount of the premiums paid.
1	£1000	£24 0 0	39	£140 13 0	£59 4 0
2	2000	71 13 4	42	284 10 0	40 0 0
3	3000	90 13 4	50	410 16 0	45 10 0
4	2000	60 11 0	47	290 4 0	48 10 0
5	1200	72 8 3	52	310 4 0	43 10 0
6	500	9 13 0	51	81 12 0	80 10 0
7	1000	48 1 0	48	192 4 0	40 10 0
8	2000	114 0 0	57	472 10 0	40 4 0
10	1000	43 1 0	61	241 0 0	56 0 0

By order of the board, PETER HARDY, Actuary.

DISEASED AND HEALTHY LIVES ASSURED.
MEDICAL, INVALID, AND GENERAL LIFE OFFICE,
20, PALL-MALL, LONDON.—Capital £100,000.

This office is provided with very accurately constructed Tables, by which it can ASSURE DISEASED LIVES on equitable terms.

The Extra Premiums discontinued on restoration of the assured to permanent health.

DISEASED ANNUITIES granted on Diseased Lives—the amount varying with the particular disease.

Members of Consumptive Families assured at equitable rates.

HEALTHY LIVES are assured at Lower Rates than at most other offices.

F. G. P. NEILSON, Actuary.

ARGUS LIFE ASSURANCE COMPANY,
18, THROGMORTON-STREET, BANK.

Empowered by special Act of Parliament, 1 & 2 William IV., cap. 76.

THOMAS FARNCOMB, Esq., Alderman, Chairman.
WILLIAM LEAF, Esq., Deputy-Chairman.

William Boothby, Esq.
Edward Bates, Esq.
Thomas Campbell, Esq.
James Clift, Esq.
Robert Inglefield, Esq.
Lewis Pocock, Esq.

Right Hon. John Humphery, Lord Mayor of London, M.P.
Thomas Kelly, Esq., Alderman.
Jeremiah Pilcher, Esq., Sheriff of London and Middlesex.

PHYSICIAN—Dr. Southwood, 5, Finsbury square.
SURGEON—W. Lawrence, Esq., 5, Frederick's place, Old Jewry.
CONSULTING ACTUARY—Professor Hall, of King's College.

LOW RATES OF PREMIUMS.

In addition to the subscribed capital of £100,000, the assured have the security of the company's income of nearly £40,000 per annum, yearly increasing, and an accumulating assurance fund, invested in Government and other available securities, of considerably larger amount than the estimated liabilities of the company.

The rates of premium are reduced to the lowest scale compatible with the safety of the assured and the stability of the company, thereby to effect giving to every policy holder an immediate and certain bonus without risk, in lieu of the collateral and frequently delusive prospect of a provisional division of profits.

ANNUAL PREMIUM TO ASSURE £100.

Age.	For One Year.	For seven Years.	Term of Life.
20	£1 17 8	£1 19 1	£1 11 10
30	1 1 9	1 2 7	2 0 7
40	1 7 0	1 9 8	2 14 11
50	1 14 1	1 16 11	4 4 11
60	2 2 4	2 5 6	6 6 10

One-third of the "whole term" premium may remain unpaid at 5 per cent. or less, as a debt upon the policy for life, or may be paid off at any time without notice.

In consequence of advances of money to security for debts, or as a provision for a family, when the usual present value is considered, the easiest and comprehensive plan of the Argus office will be found to be particularly favourable to the assured.

The medical officers attend daily at a quarter before 1 o'clock.

EDWARD BATES, Resident Director.

A liberal commission to solicitors and agents.

TO THE MINING, RAILWAY, & SHIPPING INTERESTS.
MR. ANDREW SMITH'S PATENT WIRE ROPE.

The vast superiority of WIRE ROPE for every purpose to which rope can be applied is now universally acknowledged. It has the advantage of being only one-third the weight, at one-half the cost, for the same strength of hempen rope; and its extraordinary durability is proved by the fact, among numerous others, that the standing rigging of ships in her Maj sty's navy, made with Smith's Patent Wire Rope, bring overhauled after five years' wear, were found to present no more indications of decay than the first day they were put up. For every description of mining operations where rope is required, it is invaluable, and for working trains on railways, by stationary engines, it is far superior, and less liable to accidents, than hempen rope.—For further particulars, apply to Mr. Andrew Smith, 2, White Lion-court, Cornhill; or at the office of the *Mining Journal*, 26, Fleet-street, London.

EUROPEAN GAS COMPANY.—Notice is hereby given, that an EXTRAORDINARY GENERAL MEETING of proprietors will be held at the Company's House, No. 39, Finsbury-circus, London, on Thursday, the 9th of March next, at Two o'clock precisely, for the purpose of receiving the report of the directors, and for taking into consideration clause No. 60 of the deed of settlement.

By order of the board, J. B GREAVES.

39, Finsbury-circus, Feb. 18.

BRITANNIA LIFE ASSURANCE COMPANY,
1, PRINCES STREET, BANK, LONDON.

This institution is empowered by special Act of Parliament (4 Vict., cap. ix.), and is so constituted as to afford the benefits of the assurance, in their fullest extent, to policy holders, and to present greater facilities and accommodation than are usually offered by other companies. The decided superiority of its plan, and its claim to public preference and support, have been proved incontestibly, by its extraordinary and unprecedented success.

Assurances may either be effected by parties on their own lives, or by parties interested therein on the lives of others.

The effect of an assurance on a person's own life, is to create, at once, a property in reversion, which can by no other means be realised. Take, for instance, the case of a person at the age of thirty, who, by the payment of £1 2s. 4d. to the Britannia Life Assurance Company, can become at once possessed of a bequeathable property amounting to £100, subject only to the condition of his continuing the same payment quarterly during the remainder of his life—a condition which may be fulfilled by the mere saving of eight shillings weekly in his expenditure. Thus, by the exertion of a very slight degree of economy such, indeed, as can scarcely be felt as an inconvenience he may at once realise a capital of £100, which he can bequeath, or dispose of, in any way he may think proper.

Detailed prospectuses, and every requisite information as to the mode of effecting assurances, may be obtained at the office.

PETER MORRISON, Resident Director.

A board of directors attend daily, at two o'clock, for the despatch of business.

Just published, price 1s. 6d.,

GLYPHOGRAPHY, or ENGRAVED DRAWING, with ILLUSTRATIONS, and FULL DIRECTIONS, for the use of Artists, Engravers, and Amateurs willing to avail themselves of this valuable invention, by which BOOKS may now be ILLUSTRATED in the most FINISHED STYLE, securing to the artist a faithful copy of his work, and to the author, or publisher, a very great saving of expense, the drawings being transferred to surface printing blocks, which are printed, like wood cuts, with the type.

E. Palmer, 103, Newgate-street, London.

Part II. price 1s. 6d. of the

ILLUSTRATED POLYTECHNIC REVIEW, a Record of Science, the Fine Arts, and Literature, containing upwards of FIFTY ENGRAVINGS, illustrative of various branches of Science, Literature, and Biography; and 216 closely printed 4to. columns of new facts in Science, the Fine Arts, with Reviews of, and choice Extracts from, New Books, Scientific Meetings, Music, Theatricals, Correspondence, and Varieties. PART I. price 1s. 6d., contains upwards of FORTY ILLUSTRATIONS.—This periodical is devoted to the following subjects:—SCIENCE, including ARTS and MANUFACTURES, with Diagrams. The FINE ARTS—viz., PAINTING, SCULPTURE, and ARCHITECTURE, with suitable illustrations. LITERATURE, in which Department will be included Reviews and Innovations of New Works of interest. AGRICULTURE, MUSIC, and the DRAMA, RECORDS of SCIENTIFIC PROGRESS. Each volume will form a complete book of reference for some branch or branches of science. CHEMISTRY, in its applications to the Arts, Manufactures, and to Agriculture, will be amongst the first subjects treated. A Series of Essays will be given, comprising all the known facts relating to this important section of Science. Subscription for Stamped Edition (sent free by post), 1l. 1s. 4d. yearly; 10s. 10d. half-yearly; 5s. 4d. quarterly; to be paid in advance.—London: published by John Limbird, 143, Strand. Sold by all booksellers and news agents throughout the United Kingdom.

OFFICE FOR PATENTS OF INVENTIONS AND REGISTRATION OF DESIGNS, 14, LINCOLN'S-INN-FIELDS.—Inventors and capitalists are informed, that all business relating to the securing and disposing of BRITISH and FOREIGN PATENTS, Preparation of Specifications, and Drawings, of Inventions, is expeditiously and economically effected. Also Registrations under the new Consolidated Copyright of Designs Act, 5 and 6 Vic., cap. 100.—A prospectus, containing much useful information, may be obtained, and references to an alphabetical list of patents and registrations made, on application to

Mr. ALEXANDER PRINCE, 14, Lincoln's-Inn-fields.

NOTICES TO CORRESPONDENTS.

The MINING JOURNAL *is regularly published about Two o'clock on Saturday afternoon, at the office, No. 26,* FLEET-STREET, *where it can always be obtained, and there is no cause for irregularity in its supply, to town, other than neglect on the part of the agent through whom it is ordered; but, as respects its transmission to country subscribers, the blame is shared with the Post-office authorities.*

ANTHRACITE.—"L. R."—We had not lost sight of the article on anthracite, but our columns have been so much engaged of late, that we have not been able to find room for the original matter with which we have been favoured by our numerous correspondents. We are the more anxious, however, to give insertion to this paper, as the subject of anthracite will shortly be brought prominently before the public—its successful adaptation for every purpose, by the application of a newly-introduced invention, having been, we understand, proved to the satisfaction of Government and other authorities. All particulars will, of course, appear in our columns.

COAL DUTY.—On reference to our columns, during the agitation of the New Tariff, "P. R." will find far more detailed "statistical notes of the coal trade," than he has furnished. We are, however, obliged to him for his attention and for the trouble he has taken. His papers are left for him in our office.

THE SMOKE QUESTION.—We must adhere to the determination before expressed, with reference to communications on this subject. "A Constant Reader," and "A Patentee," are, therefore, inadmissible, unless as advertisements.

SMOKE NUISANCE.—We have no "Poet's Corner;" and, if we had, "N." would most but little encouragement from us, by the insertion of such rhapsody as the "Remonstrance," addressed to Sir Thomas Brancher, Knight. It is really a pity to find, evidently, a clever man, wasting his time and talent in the concoction of such trash. Are the Liverpool papers closed against him?

"W. B" (Learmouth).—Apply to Messrs. J. C. Robertson and Co., patent agents, Fleet street, who will afford the information required.

LECTURES ON CIVIL ENGINEERING.—The concluding lecture of the series, recently delivered by Professor Vignoles, at the London University, "On Civil Engineering; with Theoretical and Practical Applications"—being a general summary of the whole course—will appear in our next Journal.

"M. F." (Aberystwith).—We are obliged by the transmission of the paper, which shall receive early attention.

GEOLOGICAL STRUCTURE OF CARBONIFEROUS.—The next paper of the series will, probably, appear in our next.

"T. W. S." (Cardiff).—The packet never reached us, or we should, at least, have acknowledged its receipt. Any expense attending a fresh compilation of such valuable information, we will gladly remit, should our correspondent be inclined to favour us so far.

MEETINGS OF SCIENTIFIC BODIES,

IN THE ENSUING WEEK.

SOCIETY.	PLACE OF MEETING.	DAY.	HOUR.
Royal Asiatic	14, Grafton-street	Saturday	2 P.M.
Royal Botanical	Regent's-park	Saturday	4 P.M.
Westminster Medical	Exeter Hall	Saturday	8 P.M.
Royal Geographical	3, Waterloo-place	Monday	8½ P.M.
Medical	Bolt-court, Fleet street	Monday	8 P.M.
Royal Medical and Chir.	53, Berners-street	Tuesday	8½ P.M.
Civil Engineers	25, Great George street	Tuesday	8½ P.M.
Zoological	37, Pall mall	Tuesday	8½ P.M.
Mechanical	Crispin-street, Spitalfields	Saturday	8 P.M.

PUBLIC COMPANIES.

MEETINGS.

London & South-Western Railway	Nine Elms, Vauxhall	Feb. 28	1.
Hayle Railway	Office, London-wall	28	1.
Consolidated Copper Mines of Cornwall	Carlyon's	27	1.
Stockton and Hartlepool Railway	Town House, Stockton	27	12.
Sheffield and Manchester Railway	Albion Hotel, Manchester	28	12.
London and Blackwall Railway	London Tavern	27	12-6.
Thames Haven Dock and Railway	7, St. Mildred's court	28	1.
Printing and Stamp Stock Exchange	Cathedral buildings	28	12-6.
Eastern Counties Railway	station, Shoreditch	28	1.
Redmoor United Mining Company	74, Old Broad street	28	1.
Southampton Dock Company	5, Bridgengate-street, within	28	2.
London and Westminster Bank	Bank, Lothbury	March	1.
Ripon and Derby Junction Railway	Hamilton Rooms, Birmingham	7	11-12.
Sheffield and Rotherham Railway	Sheffield	7	12.
Manchester and Leeds Railway	Ostrich st. Station, Manchester	7	12.
Bristol and Exeter Railway	White Lion Hotel	7	12-6.
Dublin and Drogheda Railway	25, Marlborough-street, Dublin	5	1.
Great Cork Mining Company	George and Vulture Tavern	2	1.
Alliance Gas Company	30, Finsbury-circus	2	2.
Manchester & Birmingham Railway	London-road, Manchester	2	12.
West London Railway	11, Aldersgate-lane	2	12.

CALLS.

Northern & Eastern Railway	£5 per share	March 1	As usual.
Limerick Railway and Dock Co.	£30 per share	20	Cocks, Biddulph, & Co.

DIVIDENDS.

Tamar River and Mining Co.	1 per cent.	Offices	Feb. 27.
Wheal-vor Copper Mining Co.	10 per cent.	As usual	March 1.
Great Western Railway	2½ per cent.	As usual	—.

THE MINING JOURNAL,
Railway and Commercial Gazette.

LONDON, FEBRUARY 25, 1843.

We avail ourselves of the earliest opportunity presented of placing before our readers the first of the series of Parliamentary returns, having reference to our imports and exports of ores and metals, which we purpose continuing as they appear, so that the effect produced by the Tariff may be understood. As we shall have occasion, in our future Numbers, to refer to statistical details, and to the statements drawn up last year, when the subject of the importation of foreign ores and the tariff question formed matter of discussion, we shall gladly avail ourselves of any information, calculated to elucidate the question, with which our correspondents may be induced to favour us.

As the data before us will be best understood in a tabular form, we so present it, on the present occasion, with some trite remarks, reserving, until another opportunity, those lengthened observations which the subject calls for, but which can only be duly appreciated and understood by a review of the question and reference to the past. We purpose, therefore, proceeding to give the quantities of ore and metal imported in the years 1842 and 1843—showing the increase or decrease:—

Metals.	1842.	1843.	Increase.	Decr.
Copper ore ..... tons..	48,567	49,221	754	—
Copper, unwrought ..... cwt..	10,187	6,390	—	3,797
Iron in bars, unwrought .. tons..	23,741	18,521	—	5,140
Steel, unwrought ..... cwt..	19,456	11,659	—	7,797
Lead, pig and sheet ..... tons..	1,182	2,401	1,279	—
Spelter ..... tons..	6,509	6,072	—	437
Tin, in blocks, &c. .. .. cwt..	28,435	11,120	—	17,315
Quicksilver ..... lbs..	1,925,180	2,006,911	183,731	—

Having thus given the comparative returns of "quantities imported" for the two past years, we will proceed to the second table, showing the relative proportions of quantities entered for home consumption, which will be found to be—

Metals.	1842.	1843.	Increase.	Decr.
Copper ore..... tons..	31	15,208	15,157	—
Copper, unwrought..... cwt..	4	6	2	—
Iron in bars, &c. ..... tons..	17,699	14,557	—	3,142
Steel unwrought ..... cwt..	5	182	177	—
Lead, pig and sheet ..... tons..	8	56	48	—
Spelter ..... tons..	3,066	2,906	—	160
Tin, in blocks, &c. ..... cwt..	148	460	312	—
Quicksilver.. ..... lbs..	393,479	250,260	—	44,719

On reference to the gross duty received for the respective years, we find that, for the articles enumerated in the preceding tables, the duty paid, in 1842, was 37,074*l.*; and, in 1843, 36,017*l.*; thus showing a diminution of 1057*l.*—a trivial difference, if we take the totals; but, as such involve the question at issue, it will be well to note how the amounts are made up, by which the state of the metal trade will be better understood; we thus find the results, with regard to the gross amount of duty received, to be—

Metals.	1842.	1843.	Increase.	Decr.
Copper ore.....	£ 56	£15,548	£15,792	£ —
Copper, unwrought.....	6	4	—	2
Iron in bars, unwrought	27,825	17,035	—	10,790
Steel, unwrought	1	25	24	—
Lead, pig and sheet	18	66	47	—
Spelter	7,726	2,087	—	5,656
Tin, in blocks, &c	117	145	28	—
Quicksilver	1,328	1,133	—	195

Having thus enumerated the imports, we now approach the exports of foreign and colonial produce, without reference to our home produce. In this instance we shall observe the same rule of furnishing tabular matter:—

Metals.	1842.	1843.	Increase.	Decr.
Copper, unwrought ..... cwt..	11,413	6,824	—	4,589
Iron ..... tons.	3,561	2,189	—	1,402
Steel, unwrought ..... cwt..	17,173	19,162	1,989	—
Lead, pig ..... tons.	947	1,836	889	12,883
Spelter ..... tons.	1,406	1,910	504	—
Tin..... cwt..	29,243	17,412	—	—
Quicksilver ..... lbs..	1,769,397	1,467,443	—	310,954

As we have already observed, our object, on the present occasion, is merely to direct notice to figures, reserving any observations which may seem meet until we have before us further reports, on which conclusions may be arrived at or determined, the present returns being necessarily imperfect. Having, therefore, given the imports and exports of foreign and colonial produce, we now proceed to give the exports of British produce, with which our article for this week will conclude, the amount given being the "declared value" of the exportations:—

	1842.	1843.	Increase.	Decrease.
Coals and culm	£671,28[illegible]	£735,574.	£58,287	£ —
Iron and steel	2,977,276	2,453,997	—	423,286
Copper and brass	1,323,744	1,071,756	296,010	—
Lead	242,334	207,277	115,045	—
Tin in bars, &c.	80,574	199,911	13,337	—
Tin plates	305,799	348,236	—	38,574
Salt	173,615	206,629	31,014	—

Such are the results presented us by the returns of the House of Commons, and, as we purpose comparing them with those of the preceding twelve months, and furnishing a sketch, with tabular statements, having reference to the past and present, our readers will be, by such means, best enabled to form an opinion of the future.

On referring to the List of Patents for the past month, we are glad to find that anthracite is about being applied, in earnest, to engines—whether stationary, locomotive, or marine—and thus bringing into play a vast mining district, and acting, as such, with a wholesome check on the cost of bituminous coal, which has been heretofore employed for those purposes to which anthracite is now found to be applicable. It may, at first sight, appear that we are hasty in arriving at such conclusions, from the mere circumstance of the patent being "sealed," even before the specification is enrolled; but, as one of the patentees is well known to our readers as a correspondent to our Journal, and as we have had the opportunity of inspecting the drawings and making ourselves masters of the *rationale* of the invention, we have no hesitation in saying that our Welsh friends have, at last, thrown off the apathetic garb which they had so long assumed, and that we have brighter prospects before us.

It is unnecessary, on the present occasion, to enter into minute particulars, or to describe the result of experiments made, inasmuch that in the course of the ensuing week, they will be tested by some of the first and leading men of science, whose report and observations we hope to lay before our readers in our next week's Journal. The economy in cost of fuel, consequent upon its lasting properties, and the reduced bulk for steam navigation purposes, are most important, while the total absence of smoke renders the question one of the first consideration in towns where stationary engines are employed. We confess we do not see its application to locomotives, but on this, doubtless, we may have occasion to say more. We sincerely hope that the actual working (founded on experiments said to be most conclusive) will justify our hopes and expectations, for, at a moment like the present, we not only require employment to be found, but economy in our manufactures, and which this appears to us well calculated to produce.

We have, during the past week, had an opportunity of inspecting the patent dry gas meter, invented by Mr. Clegg, in the presence of several gentlemen of science connected with this and foreign countries, and cannot but express the satisfaction which the lucid explanations afforded by Mr. Clegg and Prof. Vignoles gave to those assembled on the occasion. As we contemplate next week giving a paper descriptive of the scientific and mechanical arrangement of the meter, with diagrams, we deem it unnecessary here to expatiate on its advantages, which appear to us to be of a reciprocal nature between the gas manufacturer and consumer, while the reserve is of light—and not that of coals, no matter its properties.

VISIT TO THE ENGLISH GOLD MINES IN BRAZIL.

[FROM A CORRESPONDENT.]

Previous to giving a brief description of the mines belonging to the English companies, in Brazil, it may not be deemed uninteresting to make some mention of the route to them, from Rio de Janeiro.

There are two roads leading to them, which unite at the small town of Barbacena, about 250 miles north of Rio de Janeiro—one called the Estrella, the other the land-road. The former is the more frequented of the two, but the latter is preferred by the English. On leaving Rio for the Estrella-road, the traveller is obliged to take boat to the Porto d'Estrella, a small town situated on the River Janeiro, about thirty-six miles north of the capital. For twenty miles, one sails through part of the magnificent bay, which is full of lovely green islands, on some of which are summer-houses belonging to the English residents in Rio, or the huts of poor Brazilian fishermen. Upon entering the river, a sad change presents itself to the eye. The boat proceeds up a shallow marshy piece of water, the banks reminding one very much of the swampy rivers near Sierra Leone. Once arrived at the Porto, you land on a most filthy shore, covered with shingle, half-naked negroes, coffee-bags, and putrified fish. The boats which convey travellers from Rio are large enough to carry four persons, their luggage, and three or four horses; and, the Porto not being a very tempting resting-place, it is advisable not to delay any longer here than is actually necessary, for putting the cargo on the animal which is to carry it, mounting your horse, and starting for the foot of the Serra d'Estrella (Mountain of the Stars), a distance of eight miles, where a bed, made of Indian corn-leaves, may be procured; and here the traveller is obliged to make his first meal of *carne seeca* and *feijao* (beef, dried in the sun, and stewed with black beans)—at first a most uninviting dish; but hunger soon makes a worse meal palatable. It is necessary to be on foot the next morning before sunrise, to commence ascending the lofty Serra d'Estrella, which is part of a range of mountains extending east and west half across Brazil. The road up is a perfect zigzag, and paved the whole way (twelve miles) with broad stones. This enormous work was undertaken by the late Emperor on account of the losses and accidents which befel the *tropeiros* (muleteers) during the rainy seasons, the road being then frequently like a vast clay-pit, where many mules perished. This road was eleven years in completing. Each horse or mule passing this way pays a toll of about 8d. The tropeiros take, generally, two or three days in ascending, the labour being terrible for their heavily laden mules. On reaching the summit, the traveller has a magnificent view of the city of Rio, with its harbour, which is considered to be the finest in the world. The descent on the north side of the mountain is very trifling, the valley being already more than 2000 feet higher than Rio de Janeiro. The road from the serra has been improved in many parts in a trifling degree, but much still remains to be done. In two or three days, one may reach the small town of Parahiba and the river of the same name, which is crossed in a ferry-boat, and, the day after, the river Parahibuna, which divides the province of Rio de Janeiro from that of Minas Geraes, the richest and most populous in Brazil. The accommodation on leaving the serra is very wretched; in some places a mattrass may be found, but a *dry* bullock's hide is far cleaner, although it may be found harder, and is generally preferred; frequently one is obliged to sleep in an open *rancho* (a shed, with its roof supported by a few poles, but perfectly exposed on all sides). The food will be found to improve the nearer one approaches the mining district; pork, fowls, cabbages, and rice, are occasionally to be purchased. The provincial government of Minas has been, for some years, attempting to make a good road from their frontier to the chief town, a distance of 250 miles; but as yet only ten leagues have been completed, and this part proves what can be done. The first town which the traveller comes to after leaving Parahiba is Barbacena, where the land-road joins the Estrella route. The former is preferred by the English, who do not like trusting their lives or properties to the easily upset Estrella boats, therefore make a longer, but safer, journey, by land. The road and accommodations are similar to those just described; before reaching Barbacena, the towns of Vassouras, Valenca, and Rio Preto, assist to destroy the monotony of the journey. Barbacena is celebrated for being the depôt for the salt which is brought from Rio de Janeiro, for supplying the provinces of Minas and Goyaz. In this little town the stranger can get a clean bed, and, generally, as good a dinner or supper as a Brazilian can make. At Caranduhy, the next resting-place, one is treated in a similar manner. Hence the road passes through the villages of Ribeirao d'Inferno (River of Hell—so named from the destruction it commits by its rapid swellings), Queluz (known for the guitars made there), and Ouro Branco; all three places are very dirty, especially the last. Ouro Preto, or Villa Rica, the chief town of the province, is the next place; it was formerly very rich and populous, but, at present, does not contain more than 20,000 inhabitants, mostly very poor; it is the seat of the provincial government. The city of Marianna, a bishopric, is about eight miles north-east of Ouro Preto. Some years ago it was known as one of the cleanest and prettiest towns in the province, but lately it has been much deserted. A splendid cathedral was commenced there about fifty years ago, and nearly finished; it is now falling to pieces, but its magnificent roof still bears testimony to the labour that was bestowed upon it. Within a few yards of this building a triangular gibbet has been erected! From Marianna, the road leads, through several small villages, to Gongo Soco, the chief English mining establishment in the empire. It is 400 miles from Rio de Janeiro, and lies in about 20° 30′ south lat., and 43° west long.

This mine belonged to the late Baron of Cattas Altas, of whom it was purchased, in 1825, by the Imperial Brazilian Mining Association. The auriferous formation is jacotings, which is easily worked out, but requires great securing, with strong timber, to prevent its crushing together. Gongo has been the most productive mine in Brazil, several thousand pounds weight of gold having been extracted; in fact, the produce of one day was nearly 160 lbs. This mine, as well as all the others belonging to the companies, is worked by Cornish miners and negroes. It is pleasing to see the many happy faces of the latter, in their Sunday clothes, receiving their weekly reward of money for any extra labour they may have performed, and afterwards enjoying their national dances and songs; they have no cares; when they come from their eight hours daily labour, they find a good meal prepared for them, dry clothes to put on, English medical attendance when sick, and, when old and feeble, they know they are well taken care of. Nobody who has ever seen the negroes at Gongo, Morro Velho, Cata Branca, or Cocaes, could ever say they were unhappy. The village of Gongo calls to one's memory some of the delightful spots in the Neckar Valley. The mountains on the northern and western sides are covered with splendid verdure, and the pretty white houses at the foot of them, half hidden by banana trees, give a very striking effect. The *Casa Grande* (Chief Commissioner's house) is a fine building, and the hospitality of its inhabitants does great credit to them, and one is there reminded of the good old English cheer; besides keeping open house for all respectable strangers, the Saturday evening parties, given by the Commissioner and his lady, have been the means of making Gongo a most agreeable spot. An excellent library is kept up, and books, both useful and entertaining, are found there in abundance. The mine is open to the inspection of visitors, on application to the Commissioner, and is worthy of much notice; the washing-house, where the gold is cleaned,* and the store house, where all the mining materials and provisions are kept, are both fine buildings; besides these, the various workshops, stamping-mills, pumping machinery, &c., deserve much attention. This mine has been more extensively worked than any of the others; and, although it has produced so much, is fully capable of yielding as much more. The country around Gongo is beautifully diversified with hill and dale; about four miles distant is the famous Lagoa das Antas (Lake of Tapirs), where many a pic-nic party has been held. The company have lately increased their estate by the purchase of a large forest, which will be able to afford an ample supply of very fine timber for many years. The climate is healthy; the thermometer ranges from 45° to 85° Fahrenheit; and the soil is very fertile. A market is held in Gongo every Saturday, which is well supplied with poultry, eggs, vegetables, and fruit; butcher's meat is supplied by the company, and the miners may take as much as they please, at 2½*d.* per lb.—it is, generally, not very good. There is a neat Catholic church, situated in the middle of the village, for the use of the Brazilians and negroes, where duty is performed every Sunday. There was, also, an English chapel; but, at present, the company have no clergyman. During the last two years, the association have tried to grow their own corn, which has been found to succeed entirely, the produce being upwards of 100 for one. There is very little game on the estate, it having retreated into the inner woods, which are yet untouched by human foot. Occasionally a stray deer is found, and *inhambus* (a species of wild Guinea-fowl) are sometimes shot near the water-courses. Gongo employs, at present, about 100 Europeans, 100 free Brazilians, and 600 negroes. This little colony live in separate parts of the village, so as not to interfere with each other. Many of the miners have their wives and families with them; and there is much pleasure in seeing the ruddy, healthy looking English children, after having met none but yellow and haggard looking little creatures the whole way from Rio de Janeiro.

From Gongo the road leads westward, over a high hill, through some mines, worked by Brazilians, to the village of Caethé, a very poor place, which supports itself chiefly by the manufacture of the most inferior earthenware. From Caethé it is about three leagues (twelve miles) to Sabara, the chief town of the *comerca*, or district, of that name, situated on the Rio das Velhas, which is crossed by two wooden bridges, one of which is about 500 feet long. Sabara is about two miles in length, but can hardly be said to contain more than one main street, running the whole way through it. It is notorious for being the hottest place in the mines, and for its numberless beggars. It has about 12,000 inhabitants, who make candles for the use of the companies, and supply coarse blankets for their negroes. From Sabara to Morro Velho is about three leagues and a half; the road is very hilly, bad, and uninteresting; but the traveller is well rewarded on his arrival at this mine, which, like Gongo, is famous for its hospitality. The formation here is quartz, and produces a regular quantity of gold, which, it is hoped, will soon be increased. The mining machinery at Morro Velho, as well as at Cata Branca, is first-rate; expense was not spared in the commencement, and now the result of many years' labour may be looked forward to with tolerable certainty. Morro Velho is situated in a low valley, and is not so healthy as the other English establishments; the workings, until lately, were all open, but since the company have extended their operations, shafts and levels have been sunk and driven. There is scarcely any timber near the mine, and, although not so much required as at Gongo, still it is a heavy article of expenditure. The River das Velhas passes at a distance of about two miles; it is tolerably well stocked with fish during the rainy season, which lasts from October to March, and thus the *employés* at Morro Velho are often enabled to enjoy a luxury which is denied to those of the other establishments. The hospital garden is excellent—it is well stocked with peas, beans, potatoes, turnips, and cauliflowers, besides many indigenous vegetables; it occupies a space of nearly three acres, and is attended to by the negroes who are not fit for mining purposes; the walks under the orange and banana trees are very tastefully laid out; and the whole does great credit to the person in charge. The hospital is excellently arranged, and conducted by an English surgeon, who has had many years experience of the climate, and by whom every possible care and attention are paid to the sick.

Cata Branca is eight leagues distant. The formation is similar to that at Morro Velho. After Gongo, this has been the most productive mine in the province; and, as it has not yet been worked to any great extent, there is every reason to expect that it will soon repay the trouble and expense laid out upon it. The machinery here, as before said, is of the best quality. This company has another mine, at Conceiçao, on trial; as yet it has produced nothing, and it is doubtful whether it will be worked much further. From Cata Branca to Cocaes is about sixty miles, in a straight line; but, by returning through Morro Velho and Gongo, it is nearly eighty. The straight road passes through several small mines, worked by Brazilians; and an iron foundry will also attract the traveller's attention. Much of the iron used by the companies is derived from this source, but it requires to be well worked up by English smiths before it can be rendered serviceable for machinery, it being of a very inferior quality. Cocaes was purchased in 1833 by the Imperial Mocambas Mining Association, and has been worked since at a great loss to the shareholders. It is, like Gongo, a jacotings formation, but, unfortunately, has been hitherto very unproductive. It is situated on a very high mountain, 4500 feet above the level of the sea, and commands a very extensive view over the neighbouring hills. In the little valley on the northern side is situated the village of Cocaes, from which the mine takes its name. Eight years ago, this village was a very trifling place, but since the English have been living so near, and expending many thousands yearly in it, it has become very opulent. The houses, which formerly could barely boast of a coarse cotton blind, now shine with handsome glass windows and Venetian jalousies. Three or four shops could scarcely find a sale for their goods—now, this number has been multiplied tenfold. The man who would formerly bend and cringe for a few coppers, is now seen sporting his Newmarket-cut coat and dandy beaver, both of which are the most inconvenient things one can wear in a tropical climate. In former days a pewter or horn snuff-box was deemed sufficient; no Cocaes beau thinks now of using anything less than silver or gold. His feet are squeezed into French boots, but these save the expense of stockings. Cattle, such as they are, could formerly be purchased for 1*l.* 10*s.* per head—none can be bought now for less than 4*l.* or 5*l.* Horses were sold for 6*l.*—the common price now is from 16*l.* to 40*l.* Everything has risen in the same proportion—in fact, Cocaes has been notorious for some years for being the dearest place in the mines. The village contains about 1500 Brazilian inhabitants. The establishment consisted formerly of 130 English, 100 Brazilians, and 300 negroes, but latterly it has been reduced to about twenty-five English, not so many Brazilians, and scarcely 200 negroes. There are two branch establishments, one the Mocambas, or Cuiaba Mine, near Sabara, and the other a farm, called Rotulo, about seventy miles to the north-east. The latter is one of the finest estates in the province, and were it only nearer the mines it would be a most valuable property. It is thirty-six miles in length, and covers about 170,000 acres of land. Its fertility cannot be disputed, as will be seen by the fact of sixty measures of Indian corn yielding a crop of upwards of 9000, being 150 for one. One of the roads from Rio de Janeiro to the Diamond district passes through the village of Cocaes, thereby increasing its traffic; another leads through part of the Rotulo estate, but is of very little advantage to the company, nor will it be, until some means of conveyance, better than on mules backs, be brought forward, and which cannot be done until proper roads are made, and this the Brazilians are very tardy in doing. Rotulo has enormous forests which have never yet been trodden by human foot, and in them parts which have been opened, the finest rose, iron, satin-wood, and cedar trees are found; there are two saltpetre mines on the estate. Cuiaba is situated thirty miles west of Cocaes. It is a small mine, and can be worked at a trifling expense; it was purchased by the company in 1829. Cocaes is well wooded, and has a lake about five miles off, from which the machinery on the mine is supplied with water. This lake was formerly famous for having great quantities of game in its vicinity, but latterly everything has vanished. The tapir, otter, and ruthless cavy, were frequently seen sporting in the water, and at night time the angry cry of the cougar and tiger cat were not at all uncommon, but civilization has advanced too far towards their haunts, and they have all retreated to more unmolested parts. The houses on the mine do not present the pretty appearance which those of the other establishments do; they are mostly built of wood, and certainly not meant to withstand the storms with which they are sometimes visited, neither are they or their inhabitants very inviting, for, unfortunately, Cocaes has long been known for its want of hospitality. One gentleman, the second in command, from 1834 to 1837, certainly was an exception. Latterly, strangers avoided it, for the one too well known cause, and whilst persons of all nations and professions visited the other mines, Cocaes invariably remained unnoticed.

The journey down the country is the same as the journey up, but the traveller ought scarcely to leave the province of the mines without visiting the Diamond district, of which Tejuco and Villa do Principe are the chief towns. They are about 160 miles from Cocaes; the former is worth seeing, being the great diamond depôt of Brazil. The best time of the year for visiting the mines is in April, the rainy season having ceased by that time, and the pastirage for the traveller's horses and mules being still good.

* The process of gold-washing is very simple.—The earth, or "stuff," as it is generally called, after being brought to the surface, by means of a drawing machine, passes into stamping mills, where it is reduced to a fine powder, and washed through sieves, over bullocks' hides; the light sand is carried off by the water, but the heavier, containing the gold, remains. The mines are then washed clean, in tanks prepared for the purpose, the sediment is thrown taken out in small quantities, and washed in wooden bowls, with a little water, by an horizontal rotatory motion; the sand is cleared away by degrees in this manner, until the gold, which is the heavier part, remains quite pure at the bottom. Small particles of iron are found occasionally in it; but these are easily removed by a loadstone. The gold is afterwards dried in copper pans, over a fire; then parked in leather bags, in which state it is sent to England.

NEWTOWN AND NANTYGLO RAILWAY.—We understand the application for the Act of Incorporation of this company has been delayed until next session. This resolution, we believe, has been come to by the provisional committee, that such arrangements may be perfected, whereby its accomplishment may be secured without the expense and annoyance of a prolonged contest.

ORIGINAL CORRESPONDENCE.

EAST INDIA IRON AND STEEL.

TO THE EDITOR OF THE MINING JOURNAL.

Sir,—In the last Number of your Journal, appears a letter signed by "A Merchant," requesting information upon the subject of the iron ores produced in British India, and in regard to their use and application for iron and steel purposes by the Madras Indian Iron Company. The subject is necessarily one of considerable interest to so large a majority of your readers, that it will afford me much pleasure to furnish you all the information required. I would observe, however, that in the course of from two to three months, the Indian Iron Company expect to have completed their final arrangements for the continuous and regular supply of the Indian iron from their works at Porto Novo, on the coast of Coromandel, as they have reason to believe that all the objections which at the earlier stages of the undertaking were advanced, and which arose, in some instances, from the defective mode of manufacture, have been effectually removed, and that a uniform quality of superior iron for steel and best iron purposes, may now be depended upon from this source. The directors have hitherto purposely abstained from giving publicity to the circumstances attending the introduction of the Indian iron into the English market, on account of the want of uniformity, and occasional rejections which were apparent in most of the iron at first manufactured. They considered that until they had completely overcome these difficulties, it would be premature to direct public attention to that which was, at best, imperfect; the present mode of manufacture has, however, turned out so satisfactory, and the expression of approval among those who have used the iron, so decided, that the directors have acquiesced in the request which has been made to them upon several occasions by the secretary of the Institution of Civil Engineers (Mr. Charles Manby) to permit the subject to be brought under the consideration of that body, who will, therefore, in the course of the present session, receive a full and detailed account of the undertaking, with specimens of the iron in its several stages, &c., &c. Until these documents are prepared, it would not much advance the object of your correspondent to anticipate that which, so soon as the papers are laid before the Institution of Civil Engineers, you shall be most welcome to, and which may be expected to afford at once a guide for others who may engage in analogous pursuits, and a beacon to point out the many difficulties incidental to, and invariably attendant upon, previously untried experiments. The intimation, that "great are the dangers which environ," &c., is, by no means, exclusively confined to "the man who meddles with cold iron."

T. Macdonald Stephenson,
King's Arms-yard, London, Feb. 21. Sec. to Indian Iron and Steel Co.

[We are obliged to our correspondent for his note, and shall look forward with some interest to the reading of the paper mentioned by him at the Institution of Civil Engineers, which will find ready insertion in our columns.]

COPPER MINES IN JAMAICA.

TO THE EDITOR OF THE MINING JOURNAL.

Sir,—I observed an article in one of your Journals of November last, reflecting on Mount Vernon Mine; being one of the party who originated the company, permit me to furnish you with some particulars connected with the undertaking. I must first premise you, that I am not solely actuated by a spirit of gain—but an ardent desire to benefit the country I call my own, propels me forward in my endeavours to develope some of its hidden resources. My friend, Mr. John Drew (a native of Cornwall), although not a professed miner, is, nevertheless, perfectly conversant in the practical art of mining; we were not long acquainted, ere we agreed to explore the island for mines. In the course of our exploration we discovered several localities of rich indications, but Mount Vernon being the most contiguous to Kingston, and offering all advantages for mining operations, we proceeded in opening the same to the extent of our means, and when we found our means exhausted, we then consulted our friends, who advised us to start a company, confining the same to the people of this country exclusively. Specimens having been sent to the Geological Society of London, through the kindness of our then excellent governor, Sir Charles Metcalfe, the reports of the president, Mr. Murchison, and one of the council, Mr. John Taylor, were highly encouraging. The amount raised by the disposal of shares did not realise 3000*l.*, which, with importation of miners from Cornwall, tools, and other preliminary expenses, &c., left us but a scanty surplus for operation. Finding various obstacles thrown against us, coupled by deep-rooted colonial prejudice, in a non-disposition of the few moneyed men to assist in the speculation, my friend (Mr. Drew) and myself, resolved on forcing the company to throw the remaining shares in the English market, expecting that they would readily have been taken; but, to our mortification and disappointment (though our agent Mr. John White Cater, of Liverpool, has used the best efforts), not a single person could be found disposed to enter the speculation, thereby leaving us to conjecture and solve the cause. Your article I allude to, fully explains that cause, which is, that the prospects (as represented) are too favourable to be relied on; I will not, therefore, say a single word on the visible advantages of this mine, its locality, &c., but will take the liberty to suggest to any company, who may be desirous of embarking a small capital in an advantageous mining speculation, to send a competent person by the first packet for Jamaica, and let him visit Mount Vernon Mine, and by his report let them be guided; I ask no more.

Kingston, Jamaica, Jan. 16. John Duncan.

THE LEAD TRADE.

TO THE EDITOR OF THE MINING JOURNAL.

Sir,—A letter appeared in your last, signed "A Lead Miner and Merchant," in which the writer remarks, that "Sir Robert Peel, in his Tariff, has certainly inflicted a blow on the adventurous miner, which has destroyed his property, and almost his energies for adventure." Now, I am deeply interested in the prosperity of the British lead trade, and would, therefore, feel obliged to you, or some of your correspondents, for a statement of the quantity of *foreign* lead and lead ore imported and *entered for home consumption* since the new Tariff came into operation—viz., in July last. We shall then be enabled to ascertain the effects of Sir Robert's Tariff upon the mining interests of this country, by comparing this statement with the quantity so imported and entered during the corresponding period of 1841. I wish "A Lead Miner and Merchant" would enlighten us a little more about the said "Leviathan Lead Company"—"the city member"—"celebrated knight"—"great Roman Catholic smelter"—"great commercial smelter," &c. J. W.

London, Feb. 23.

[As soon as the Parliamentary returns are made, they will be inserted in our columns—meanwhile "A Lead Miner and Merchant" may be able to satisfy our correspondent.]

ON THE VENTILATION OF MINES.

TO THE EDITOR OF THE MINING JOURNAL.

Sir,—"An Old Coal Miner" is perfectly right in placing his steam jets in the drought pit. The more the air is rarefied in that pit the better; but if these jets were thrown into the downcast pit, the air would be rarefied in both pits—the one by the steam jets, and the other by the furnace—and they both would be struggling against each other; therefore, the steam jets would impair the regular drought. It is more to the irregularity of the drought in mines that subjects them to entanglement, than almost all other circumstances put together; for, however perfect the airways are, if the furnace is not kept always sufficiently supplied with fuel, so as to keep the air in the drought pit well rarefied, the air would return the wrong way, and, instead of carrying out the foul matter with it at the drought pit, it will accompany the air back the wrong way, and go with it into the workings, and, instead of its being got rid of regularly at the drought pit, it will be passing backwards and forwards in the works, and fill every caverne it can find them, and a mine in that state is quite ready for an explosion; and, when the explosion has taken place, and the mine is examined, the air roads are found good, it is usually said; but please to observe, by that time there is a roaring fire in the furnace, and the upcast pit is well rarefied, and the drought going through the work regularly the same way, for the furnace is always the first thing attended to after an explosion. I would just make a remark or two on the ventilation of mines. It is the custom in some of the coal mines in the north of England to sink one large pit, and then divide it in two by a wooden partition, and make the one side that partition the downcast, and the other (by a furnace near the bottom of it) the upcast pit. That is a bad method of doing things; there should be always two pits from the surface to perfectly air a mine, those two pits being opened both each other. Nature, herself, will declare to us which should be the upcast pit; for, generally, with the temperature of changes in the weather, the same pit will draw the air to it, and that will be the pit, the top of which stands highest on the surface—please to observe when one pit is partitioned into two. Nature does nothing, because both divisions of the pit are of the same height)—then, having made choice of your upcast pit, which, as I said before, Nature will instruct us, we have only to place our furnace in that pit, and help Nature. Now, if the furnace is placed in the wrong pit, it will be always acting against Nature, and, as I observed above, the moment the fire in the furnace is low, the natural draft overpowers it, and carries back the foul air into the workings. It is a difficult thing sometimes to keep the air into forward workings of mines, and great caution is necessary, but when the upcast pit is well chosen, and a proper furnace placed in it, as far as that draught can be made to sweep the workings, it will clear any mine in the world.

Blaenavon, Feb. 22. Thomas Deakin.

ON THE BETTER VENTILATION OF MINES—No. II.

TO THE EDITOR OF THE MINING JOURNAL.

Sir,—Having, for some time, been practically engaged in superintending and directing the operation of mines that have given off large quantities of inflammable gas, I have been induced to study the subject, as scientifically as my means and ability would allow, taking, at the same time, every assistance that could be found, that I might arrive at something like a tangible and safe mode. I, then, for the benefit of others, offer my views on this very important subject.

In every mine, I conceive, impure air is to be found. Some are more disposed to one gas, or kind of impurity, and some to another—that is, some are infested by *carbonic acid*, or fixed air, and others by *carburetted hydrogen*. The one destroys life, by being too heavy, and, consequently, irrespirable, and the other generally by inflammation, or ignition. We say generally, for it is a fact, not extensively known, that carburetted hydrogen will also produce profound coma, as well as the other, for I have seen men fall as dead in the latter as I have seen them fall in the former; and, unless help had been instantly afforded, death would have been the result. The *carburetted hydrogen*, however, is the most to be dreaded, because its ravages are the most extensive, and its attack the most sudden and unexpected. The carbonic acid, generally, shows its appearance on the flame of the candle *perceptibly*, by a decreased size of flame, &c., but the other shows no appearance, unless some art be used, and that in time too, or else an explosion is the consequence. To save, then, from the devastation of this *carburetted hydrogen*, an effective ventilation is the only effectual remedy to be applied. For this some scientific knowledge is useful, or else we allow the enemy to have the advantage of a hazardous game. For thus meeting the foe, perhaps, the following may be useful to some of your readers:—Four things are to be attended to in an efficient ventilation—*viz., ingress, egress, method of conduction*, and the *motive power*. The ingress should be such as to afford every facility to the circumambient air descending the mine or pit. The egress should also be as much protected from every blast of wind that might cause a reflux or impediment to the ascending current. These are generally attended to by mining agents, as circumstances will allow them. The next point we have noticed is the conduction of air into and through every part of the mine, so as to leave no room for the collection of the gas in a stagnant state, nor to impede the progress of the current by reducing the apertures through which we wish it to pass. This is accomplished by *stoppings, doors*, and *brattices*, being suitably placed in the mine, and by causing every place to be kept open, and of such a size as will correspond to the required size found in the formulary of calculating the quantity. The last particular is as important as either of those mentioned above. In selecting this power, two things must be kept in view—viz., the quantity required, and the way to obtain that quantity to most advantage. First, then, as to the quantity to be sent into the mine. Here we have much doubt and uncertainty to endure, since we cannot tell how much gas will be exuded from the mine generally, or how much shall be sent out of every working place. By way of getting through the above difficulties, we generally consider what sort of coal we have to cut, whether it affords a large or a small proportion of gas. The next thing before us is the number of places working at the same time, and the next the extent of the workings through which the air has to travel. Yet we may be at a loss for *exact* data on which to calculate safely, as a greater quantity may come off at one time or place than at another, as well as the state of the air thrown into the mine or pit, may itself be more impregnated with hydrogen than at another time. We then must have access to our own, or the experience of others, to enable us to arrive at the data needful. In this I shall give a useful rule for calculating generally the quantity, and in my next give the means to be employed as best affording the needful supply for safety to the pit in all ordinary circumstances.

In calculating the quantity of air requisite, we must fix on the smallest-sized aperture we have in the air-course, and, from that, calculate the velocity needful to bring in the quantity to keep the mine safe and healthy in ordinary circumstances. The quantity found, by Mr. Buddle, sufficient for that purpose, is 7200 solid feet per minute. We also should fix on the same, as we have never found it to be deficient, to mix or dilute the gas sent off from the mine, even when worked on a large and extended scale; and, as we approve of the inducing, rather than the propelling system, we give the following formulæ for calculation, in fixing on quantity, velocity, &c.:—For the velocity, $v = \sqrt{2\ g\ h\ m\ (t'-t)}$, and

For the quantity, $q = a^2 \sqrt{2\ g\ h\ m\ (t'-t)}$, and

For the area, $a = \sqrt{q}$

$\sqrt{2\ g\ h\ m\ (t'-t)}$.

Here, then, we have v for velocity, q for quantity, a for area of passage, h for the *difference* of the depth of the two air passages in the shaft, m the rate at which the gases dilate for every degree of heat, t the common temperature of the atmosphere, t' the increased temperature of the air by induction, and g the influence of gravity, which influences gases as well as solids and fluids. Here, then, we have several quantities, that may easily be ascertained. To find the quantities wanted:—1st, h can be found by measurement; 2d, m is already established by experiment, and is found to be $\frac{1}{480}$, or '00375, for every degree of dilation; 3d, the difference between t' and t may be found by a good barometer; and, 4th, the quantity, g, is always taken 32 and a fraction, or, for general purposes, at 32. By way of illustration, then, we shall suppose a case. Let ten feet be the difference between the two shafts, as to depth, &c.—then h will be equal 10; and let the difference of temperature between the descending and ascending currents be 50°—then, by the formula, we have for the velocity, $v = 8 \sqrt{10 \times \frac{1}{480} \times 50} = 8$, in whole numbers, per second, and that multiplied by 60 = 480 solid feet per minute. Let next the area of air passage be equal to sixteen feet square—then we have by next, $q = 16 \times 480 = 7680$ feet per minute—a quantity which, after allowing for waste and friction, &c., may be deemed safe. The velocity and area may vary, and then each will influence the other. In my next I shall likely take up the subject of *ventilation*, or the best methods of inducing the draught in pits or mines.

Cwm Avon, Feb. 13. U. Thomrow.

MR. SIMS'S IMPROVEMENT ON THE STEAM-ENGINE.

TO THE EDITOR OF THE MINING JOURNAL.

Sir,—Having seen, in the *Mining Journal* of the 28th January (which has just been sent me by a friend), a letter signed J. Sims, in which he endeavours to prove that the most economical mode of expanding steam is by means of his combined cylinder engines, I beg to send you the following reply. Mr. Sims might safely have been left unanswered, but, as there are many of your readers who have no other means of obtaining information upon this subject than through the columns of your paper, and who would, possibly, be misled by his statements, I have thought proper to endeavour to place the subject in its proper light before the public.

In his letter, he says—"The dangers attending the mode of expanding steam in a single cylinder are—1st, the danger of explosions of boilers by using very high-pressure steam; 2d, the danger of breaking the materials by the sudden admission of high-pressure steam." With regard to the first objection, it does not follow, that, in order to insure a high rate of expansion, the steam must be proportionably high in the boiler—on the contrary, at the United Mines (Taylor's engine), where the expansive principle is carried out to its fullest extent, the pressure in the boilers is not, at its height, above 38 lbs. per square inch. By having larger steam valves and pipes, a greater quantity of steam is applied, and a higher rate of expansion is obtained, without increasing the pressure in the boiler. But, supposing steam of a much higher pressure than any now used in the country to be used, would Mr. Sims, or any other engineer, anticipate explosions on that account? Are explosions less frequent now than when Woolf and Trevithick worked their steam 140 lbs. per inch? the danger exists only in Mr. Sims's imagination. It would be easy to show, if necessary, that high steam has little or nothing to do with explosions. Supposing the danger alluded to in the second objection to exist, could it not be averted by increasing the strength of materials? The additional expense of Mr. Sims's combined cylinder, &c., could be much more profitably expended in strengthening the simple expanding engine, thereby securing the twofold advantage of expanding steam direct, and in a single cylinder, without sacrificing economy, as in the combined scheme. I do not, for a moment, attempt to deny that Mr. Sims's engines have an advantage over Mr. Watt's unexpanding engine, but I do deny that his engine ever has, or can, equal the simple expanding engine. He says—"Steam can be expanded more economically in my combined than in a single cylinder engine." This I deny. Combined cylinder engines expand the steam in an indirect and complicated manner, while the single expanding engines do it in a direct and simple manner. In the single cylinder engine the expansive principle can be extended to infinity, but in the combined engines the more you expand in the small cylinder the less you have to expand in the large one. Then there is the loss arising from the leakage of two pistons (instead of only one in the single engines), and both ends of the great cylinder being open to the condenser necessarily tends to keep it cool. Further on, he says—"All single engines can be made double power by the same steam, and effect a saving of nearly one-half the fuel." Would that Mr. Sims could effect one-half of this. Does he think the United Mines engine (Taylor's), even if she had an additional cylinder, would perform 214 millions? She has already reported 107—every tree is known by its fruits. Now, if we look to Lean's *Engine Reporter*, we shall see what a disparity there is between the facts, as reported, and Mr. Sims's assertion. The last report (December) gives:—

Sims's (combined)	85,680,000 lbs.	Sims.
Taylor's (single)	99,000,000 „	Hocking and Loam.

What a bold man, then, must he be to make such an assertion, with this report staring him in the face! What an insult to your readers! To increase the size of an engine is all that Mr. Sims does, or can do, by his combined scheme. With his 50-inch and 90-inch combined, his engines are, in fact, only equal to a 70-inch single one. What a monstrous gain of power!! What a complicated scheme to make a 70-inch cylinder engine! In short, Sir, the "combined scheme" is only a clumsy and complicated contrivance for increasing the size of an engine, and whatever advantages may be supposed to attach to them, can be realised in single cylinder engines; and, by increasing the size of the latter, steam of a comparatively low temperature can be used without the least injury to the materials.—*St. Day, Feb. 15.* M.

SMOKE-CONSUMING PATENTS—PUBLIC PROPERTY.

TO THE EDITOR OF THE MINING JOURNAL.

Sir,—Acrimonious controversy cannot but be painful to gentlemen—assuredly the amiable individuals who have been conducting the animated discussion concerning the smoke-burning invention, in your columns, of late, must have endured much laceration of mind in the remarks they have felt it necessary to offer on each other's accomplishment and veracity. To smooth the troubled waters would be, it is presumed, both to writers and readers, an acceptable service—certainly, the attempt is made in a peace-loving spirit. Perhaps the following extract, from the *Journal of Science*, vol. xix., for 1825, will enable the gentlemen in question, as well as the public, to adjudicate on their respective claims to "patent rights?" and produce, in each, concessions which may tend to mitigate the other's sense of injury. It may, at least, teach them the policy of carrying on their controversy more privately, by showing them that, so far as the question at issue is of any moment, other claimants to the invention may arise, and that the profits of it belong to neither of the combatants, but to the public at large:—

"Method of Consuming the Smoke of Steam-Boiler Furnaces, &c. By Mr. Chapman.—Mr. Chapman's process consists in the introduction of air into the furnace beyond the fire; but he uses peculiar means of heating this air before it is introduced, and this renders the combustion of smoke more ready and perfect. He says—'To heat the air before its admission into the furnace; this I do by casting the grate-bars hollow, from end to end, so that they form a series of parallel tubes, which open into two boxes—one placed in front and the other behind the grate. In the front box, directly underneath the fire door, I make a register, to open and shut, to any extent, at pleasure. The other end I connect with the brickwork, directly under the fire-bridge, which fire-bridge I make double, with a small interval between—say, one inch—the interval to go across the furnace, from side to side, and rather incline forward, or towards the fire-door, so as to meet, and reverberate the smoke on the ignited fuel in the grate, which causes it to inflame and become a sheet of bright fire under the bottom of the boiler.' Consequently, when the register is open, air passes along the bars of the grate, becomes heated in its passage, and is then thrown on the hot smoke, causing its inflammation and combustion."

A peculiarity concerning the mode of supplying the grate with fuel is next described, and the account closes with the following paragraph:—

"The certificates of persons who have witnessed the effect of this application, speak of its entire success; those who, previous to the erection of the engine, apprehended a nuisance, have been agreeably disappointed—smoke being seldom seen. On the application of fresh fuel, the smoke assumed the appearance of a light grey vapour, which, in a few seconds, became almost invisible."—"An unlooked-for advantage also is, that the grate-bars appear to last longer when thus constructed."—*Trans. Soc. Arts*, vol. xlii., p. 32, 1825.

Liverpool, Feb. 18. A Lover of Good Manners.

[We readily concur in the expression conveyed in the first line of our correspondent's letter, who, quietly enough, brings us to the main question—Has Mr. C. W. Williams or Mr. J. Williams a right to a patent? That the latter has none we believe is admitted, except any equitable interest he may possess in that taken out by Mr. A. Kurtz, and, as this latter gentleman repudiates the plan adopted by Mr. J. Williams, it is to be presumed that no patent exists for the process employed by him; or, if so, that it is an infringement on that of Mr. C. W. Williams. With regard to the extracts made, it does not appear to us that they in any way affect the patent of Mr. C. W. Williams, as the claim is to the application of heated air, while that of Mr. C. W. W. takes the air in as cold a state as he can obtain it. The casting of hollow grate-bars is, we believe, a part of Kurtz's patent, although abandoned by Mr. J. Williams to the furnaces to which he has supplied the apparatus, which is by an admission of heated air, regulated by a valve, as shown in the diagrams which have appeared in our columns. We believe neither party claim the double bridge, and, so far, our correspondent is right, as being nothing novel. We must leave it to the "combatants"—the two W.'s—further to discuss or elucidate the question, which we hope they will transfer to our advertising columns.]

THE SMOKE QUESTION.

TO THE EDITOR OF THE MINING JOURNAL.

Sir,—The smoke question having occupied so large a space in your columns lately, and of an uninteresting nature, I have no doubt but many of your readers are quite tired of it—may I, however, beg the favour of your inserting the following remarks, being a reminder to Mr. Williams's last two letters, and on behalf of the public, who are in possession of an effective and economical plan for the prevention of smoke, and which does not infringe upon any patented one. The interesting matter propounded from time to time in your valuable Journal, I take to be intended for the public good, and anything which may contribute thereto, fit subject for advocacy and insertion therein; on the contrary, anything which might have a tendency of depriving the public of the free enjoyment of due privileges—as, for instance, fostering illegitimate claims of monopolising patentees, I deem as *materiel* unsuited for the columns of a public Journal like your's. I beg it to be distinctly understood, I have not the least personal feeling against any one, more particularly Mr. Williams, whose chemical views I admire; but it is against his plan—in direct contrast with my own (which is now public property)—I would write, and estimate the capability and merits of the two, which can alone interest the public.

The subject-matter of dispute—viz., the mode of admitting air to the furnace, I think sufficiently answered in my last, and powerfully supported by other writers in your Journal. Mr. Williams in them said the success of my plan is not dependent upon a rack or trellis for admitting air, and I frequently employ precisely the same means for speaks of—viz., a single orifice, or opening, with a valve, for supplying and shutting off the air, as may be necessary, and which answers quite as well as a rack, and is, in every case, optional with the party requiring it. Mr. Williams may likewise have overlooked the explanation I gave of the "floral bridge." I will give it him a little further:—It is a mechanical contrivance, or arrangement, for attaining a chemical result, and is as much superior to the common Argand—the former preventing smoke in the combustion of oil, which the latter is incompetent to; it serves precisely to prevent the escape of the gases evolved from the coal using the cooling surface of the boiler tubes, and, by means of the draft, compels them to pass through a hot fire medium, wherein they arrive at that degree of attenuation which is necessary, to render them suitable for combining with a due supply of air from the front, and passing over the fuel, for effecting their complete combustion. This admission of air in the front has a most beneficial effect, as, in conveying over the fire, the greater part of the volatile carbon burns along with the hydrogen as it escapes from the fuel, and without rendering the draft.—as in Mr. Williams's plan.

I am sadly at misapprehension, when I repeat, Mr. Williams circulates the admission of air in the front of the furnace, and passing over the fuel on the bars, &c., and may quote a few passages from his Treatise in proof of my assertion. At p. 16, Mr. Williams says—"In what place, then, should the air be admitted?—the following remarks, not at the bridge, or in front of it, the alternative being, that as the air to the fuel on the bars must come from the ash-pit, 'that to the part will be a hot ash-chamber beyond the bridge.'" At p. 31—"The air is all drawn entering the chamber 'behind the bridge,'" and, at p. 32, "keeping this supply of air for the consumption of the gases apart from the air entering to the carbon on the bars." Now, this admission of air behind the bridge is what Mr. Williams advocates, and what I maintain objectionable; his machinery is most accurately understood in terms of Mr. Williams's statements, where bituminous coal is used, and I affirm, that not one of his furnaces consisting of the present time, having supplies more to perform, is capable of burning the lighter bituminous and subbituminous kinds now one of the greatest interest and which in the regular engine coal, without making a tremendous smoke.

My plan accomplishes it perfectly, and I will engage it against Mr. Williams's, with the above coal, and have no other apparatus for admitting air to the gases than simply the fire-door itself. I mention this, merely that the public may not be misled by adopting improper plans, when contemplating alterations in furnaces.

I imagined, from the concluding part of Mr. Williams's letter, in your Journal of the 25th ult., he was about to make a virtue of necessity, and most philanthropically throw open to the public his valuable patented invention of jets, and flues, and divisions of air (which I think are incomprehensible to every one except himself); but it appears he has resuscitated again into the patentee. I can only further observe, with reference to Mr. Williams's plan (notwithstanding the puffing of it by his agents), it meets with neither the countenance nor approbation of either the Leeds or Bradford Smoke Committee; and, from the severe comments it has received from time to time in your Journal, and other publications, as well as its numerous failures in practice, I presume it does not rank in the estimation of the public, as the *sine qua non* for the prevention of smoke. E. BILLINGSLEY.

Bradford Moor, Feb. 28.

[Mr. C. W. Williams will, doubtless, reply to our correspondent. Will these gentlemen recollect that our columns are confined for space?]

COMBUSTION OF SMOKE.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—Mr. Williams, of Liverpool, ridicules, and entirely repudiates, the combustion of smoke. Unquestionably, smoke may be entirely prevented, by perfect combustion in the first instance; but smoke, after being disengaged from imperfect combustion, may as certainly be consumed. Smoke is carbonaceous matter, and this being susceptible of ignition and combustion, may, it necessarily follows, be entirely consumed by its transit through ignited coke, &c.—a process successfully carried into effect. One would really think that Mr. Williams had either never seen or heard of a chimney being on fire! A simple illustration may be referred to. The flame of alcohol yields no smoke, the carbon being entirely consumed; camphor being inflamed yields smoke, because the combustion is imperfect, but if the inflamed camphor be now introduced into the centre of the other flame, no smoke will be evolved; the alcoholic flame will, however, have an increased illuminating power, from the added carbon. In 1818, I introduced into the cone of alcoholic flame a tube containing water; the water boiled, and the flame was thereby elongated, and increased in intensity. I then announced that the time would come when water would be used as fuel. I subsequently, at Bewdley, had the principle applied to a boiler, and Mr. Ivison, I believe, has obtained a patent for the plan. Dr. Fyfe, of Edinburgh, has shown that water is decomposed if steam be passed through charcoal—*à fortiori*, we may well believe, that its decomposition is effected in passing through flame, which is ignited carbon, &c.

Lichfield, Feb. 15. J. MURRAY.

[We are glad to find this subject treated upon in a scientific manner, and doubt not but that Mr. C. W. Williams will reply to our correspondent. It is to points such as form subject of the present letter, that we would wish our columns to be devoted, and not to personal controversy.]

ARTESIAN WELLS.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—The unsuccessful attempts to procure water by the process of boring, at Southampton, Brighton, and elsewhere, although deeply to be regretted, are good practical lessons on the folly of commencing undertakings of this expensive nature without good and substantial reasons for believing that waters are therein locally disposed. It has been laid down as a fixed principle, that water may always be found by boring for it, but this, as has been practically proved, is erroneous; for, although diffusely distributed within the superficial crust of the earth, and even beneath the ocean bed, yet, at the same time, they are always locally disposed. All waters within the bowels of the earth are derived from the surface of the earth, and, consequently, their abundance must depend on the quantities received, and the capacity of the beds to retain them. The green sands of Montmatre receive the waters, and transmit them to the lower depths at Grenelle, and, in like manner, particular strata, vertically disposed, sometimes retain them from the surface to the lowest portions of these beds. Chalk formations readily receive and transmit the waters, the more consolidated portions forming, for a time, natural tanks, or reservoirs, but if the underlying or contiguous beds are of a porous nature, it is almost certain that the chalk will be drained, and the waters be lodged in the porous beds. In the London clay there are extensive natural reservoirs of waters received directly from the surface, or following the disposition of the beds from the upper to the lower lands; but, at the same time, I hold it to be absurd to suppose that the inhabitants of this vast metropolis could be supplied with all they require from this source, and the truth of this would soon be made manifest, when a number of large wells were made in close neighbourhood to each other, the one draining the other dry. If the dip of the strata is downcast from the ocean bed at Brighton, or from the surface soil at Southampton, it is not likely that the waters will be procured other than at the lowest depth, or in adjoining strata of a more porous nature, yet in some of the beds, horizontally disposed, a portion of the intruding waters may be retained, in like manner as they are in the London basin, as it is termed. That the subterranean waters are derived from the surface of the earth has lately been proved in various parts of France, within the circle of the Paris basin, where absorbent Artesian wells have been successfully resorted to as a means of drainage, and the tainted waters got rid of have invariably affected the neighbouring wells. In many parts of the earth the inhabitants are wholly dependent on this mode of supply for the whole or greater portion of the year, and in years of drought this resource fails; thus, in Upper India, in 1831-2, the drought was so great as to cause an enormous sacrifice of life, and the desolation of entire provinces, and even in this country the springs have been known to fail. When Artesian wells are to be dug, it is highly necessary that the nature and dip of the strata be considered, and the successful issue of boring at Grenelle should not lead us to suppose that water can be found at any time beneath our feet; it is true that, at very great depths, the chances are, in this country, favourable to a successful issue, but the expense of the undertaking will generally counterbalance any advantage to be gained from it. MINERALOGICUS.

Brighton, Feb. 21.

REMEDIES FOR DISTRESS IN MINING AND MANUFACTURING DISTRICTS.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—I have just received your Journal of the 10th of December last, in which you notice a proposition of a Mr. Nicholas Cawthorne, for relieving the present alarming distress in England, by the employment of the superabundant labour in cultivating the waste land of that kingdom; and having recently received some papers on the same subject by your philanthropic and well-meaning correspondent, Mr. S. B. Rogers, of Nantyglo, I am induced to trouble you with a few observations on the subject, trusting it may be taken up by abler hands, and attract, at no distant day, the attention of the affluent, the patriot, and the statesman. Though, in Mr. Rogers's papers, he does not explicitly state the details of his plan, it is evident his object is to form county associations of the unemployed labourers, under proper rules and regulations, and thus bring the produce of their handiwork into the market, taking other merchandize in exchange. This alone, if carried out, would cause a vast increase in the consumption of all articles; but if a modification of the two plans were adopted, simultaneously, it does strike me that a feasible, economical, and ultimately a nationally profitable, system, would be found in the result. In connection with the cultivation of the waste land, villages must be erected, and the inhabitants, having become producers of wealth, would take, in exchange, the products of your thickly populated manufacturing districts, and under proper rules, as recommended by Mr. Rogers, in his plan of forming the labouring population into county associations, the distribution of the fruits of these new societies would be properly regulated, the offspring of the inhabitants educated and brought up in physical and moral rectitude, and the whole of society relieved from the degrading examples of that poverty, ignorance, and crime, which at present pervade the land; and I sincerely hope that some patriotic individuals, with the power to carry out some such plan, may speedily be found; as I verily believe, although Sir R. Peel has stated "that the present distress cannot be ameliorated by artificial means," some such plan as that pointed out by Mr. Rogers is the only legitimate one for restoring my country to its once happy and contented state. AN ENGLISHMAN.

Tobago, Jan. 3.

[We have been favoured with an outline of Mr. Rogers's views, and purpose directing attention thereto in an early Number. The question is one of great importance, but as travelling somewhat out of the course laid down for the insertion of matter in our columns, we cannot enter upon it, so as to do it justice, without displacing other matter which has a more legitimate claim to our attention. Our correspondent may rest assured we shall not lose sight of the interesting views of Mr. Rogers's proposition, both in the absence of any abstract of its practical position, till some one better qualified by the possession of the matter.]

ON THE ORIGIN OF MINERAL VEINS.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—Your Oxford correspondent, "J. S. D.," seems to me to be desirous of eliciting information from practical miners, much more than he is desirous of supplying them with scientific knowledge. Now, Mr. Editor, as a scientific gentleman yourself, I beg leave to ask you a question, which is as follows:—Can any speculation, or opinion, possibly be scientific, which is founded upon any subject beyond the powers of man to demonstrate? If so (and I think it is so), the very many speculations and opinions, conflicting and various as they are, on the formation of coal, ironstone, and other metals, are not the whole of them unscientific? In chemistry, in surgery, in mechanics, in navigation, in all kinds of civil engineering, and in practical mining, scientific knowledge may be acquired and applied; because science can, and is, demonstrated by practice.

If I am right in this question—and you shall, if you please, decide it—I shall at once turn the tables upon my Oxford opponent, and place myself in the scientific chair. He says, my knowledge is bounded by my native hills—I suppose he means the South Wales ones; in that he is mistaken. Near three times seven years had passed over my head before I saw those hills; the first hill I ever saw was the Wrekin, in Shropshire. But it matters not where I learned my trade; if I could bring myself to believe that I had learned it well (that I am sometimes very doubtful of) I should have no hesitation in at once calling myself what "J. S. D." calls himself—a man of science. He laments that I am debarred the use and perusal of those scientific works from which alone I should be enabled to abstract a knowledge of the changes continually going on, both upon and beneath the face of the earth. Upon the face of the earth, I admit, great changes have, and are, taking place; but beneath the earth, I cannot admit—nor should I believe such works—that any change has ever taken place in the stratified portion of the earth, containing mineral beds, besides what the miner has made, by extracting them from the bowels of the earth. He tells us he has seen changes in the earth, made by flood and fire.—Yes; the surface, not the strata. He has walked, he says, over the beds of the largest rivers of the earth, dry-shod.—So he might, if he has been across the Delta, in Egypt; but what has that to do with the earth's stratification; alluvial matter, brought down by the Nile, did that. He tells us he has seen the interior of the earth pour out its molten lead.—(Not lead; ashes and pumice). So did the younger Pliny, and lost his life by it; but what of that?—there are no mineral beds in Vesuvius; that very useful vent of the earth has its proper distance from mineral formations. Then he tells us that the land encroaches on the sea, and the sea on the land.—What has that to do with the first formation of minerals? Then he says the sea is filling up with remains of animal and vegetable bodies; and these mineralising into coal and ironstone.—Now, this last I deny *in toto*. Produce, "J. S. D.," if you can, one single atom of coal or ironstone, mineralised in the way you say. If it is produced, as you say, by vegetable and animal matter, and you have seen it in progress, you must have seen it in various states of progression—just beginning to change its quality from vegetable and animal matter to coal, and again in a more forward state, and also in the complete metamorphosed state, why had you not secured a sample or two of coal and ironstone in each state of transformation? If you had them by you now, it would go further to convince me that I have formed wrong notions on the formation of minerals, than all the schoolmen can say, or all the books written upon the subject since the earth was formed. I must, once for all, tell "J. S. D." that he never will produce any such samples that I have required, nor ever can; and I must tell him again, that the foundations of the earth standeth sure. Whatever revolutions might have taken place on the surface of the earth, the stratified parts and mineral beds of the earth are as they were placed by the Creator's hands. THOMAS DEAKIN.

Blaenavon, Feb. 22.

ON MINERAL DEPOSITS.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—I beg the favour of asking (through your Journal) your Oxford correspondent, "J. S. D.," whether works on science belong *exclusively* to the schoolmen? or whether they are not the common property of the learned and unlearned? For whom are they published but the unlearned—at least in those respective sciences on which they treat—that they may become wise also. Is there not a common right in science generally? and shall not the practical man—if his means, &c., will allow him the opportunity of peeping into the chambers of learning—be allowed to set his foot on the precincts of the sacred territory? Why not? The schoolmen ought to say, as did the immortal Newton, when he saw the desponding mind of his friends, "Be not discouraged at my removal, for I am only as a child who has hit upon a more precious pebble than his fellows; yet are there depths beyond, that have not been approached."

Now, though the practical man may not be blessed with the means of discovery, yet he may occasionally check the audacity of some wild speculations, by seeing manifestations of nature in her secret and hidden parts. To what has geology, as a science, been indebted, if not to practical observation? Now, Mr. "J. S. D." may have seen all he so vauntingly boasts of; but we scarcely can suppose a man of such extensive research would ride rough-shod over all practical men. Theories may be abundant, and as wild as abundant, but they must be confirmed by practice, or else they are worth nothing. He must remember that he is not the only one who is convinced that mighty changes have taken place, and are now taking place, in the earth; and these, too, by fire, and by water, and by earthquake, &c., &c. But what we contend for is, these are but *agents* in the hand of the All-wise disposer of all things, who rules for the weal of man. We still contend that the word "create" was *not* in place in the former letter of this, your learned, correspondent. It has a proper and specific meaning, although it may be used in an accommodated sense occasionally. The idea attached to the Hebrew word, by the Rabbins, was always that of a *production ex nihilo*, when used in its primary sense. We see not that the sun creates heat—in that acceptation of the word in which it is commonly used; he only excites that which already exists, but, by absorption, lays dormant. Nor do we see that the waters and the earth give life to animate creatures. The Almighty did create, out of them which were inanimate and apparently unorganised, those creatures of the animate and organised world; but here we see again exist that which had before existence, for where was there the least appearance of self-locomotion; to say the least on this subject, all was in the possession of the common properties of matter, until the power of the Creator was exerted in the productions. Here I must stop, or my subject will lead me into the distinctions of material and immaterial things. What I want is, to check that spirit which, regardless of the existence of any rule by which it should be guided, would sport with temerity on the margin of ruin. Allow me, then, to ask those learned schoolmen, who have seen all the wonders of the world, and who have have framed such improbable theories, one question—How is it that any given coal vein, or seam, in passing over a fault, shall increase two, by the intervention of eight or ten yards of strong stone!—or, how three veins, in passing another fault, should become one? Whether was the dyke—the fault or the vein! or, were they formed at one time!

Cwm Aman, Feb. 20. U. THOMPSON.

ELECTRICITY IN METEOROLOGY.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—Electricity has achieved in these days mighty conquests for the arts, in electro-plating, gilding, &c., and in association with its evolved magnetism, it is impossible to say where the chain of interest will end. But, apart from those things, and its importance, as yielding, by a study of its laws and phenomena, the requisite information whereby we may shield our persons and properties from the destructive effects of the descending meteor, it occurs to me that it might be made the minister of a warning note, of impending danger, or a cheering omen, and thus advertise the mariner at sea, or those in seaports, or along the coast, of impending danger. The indications of the symplesometer and marine barometer, are not to be disregarded, but I believe that the evidence of electricity would be every way more decisive. Attached to the walls of the castle of Duino, on the Adriatic shores, is an iron pike; the sentinel on duty touches it, from time to time, with his iron-shod halbert, and if an electric spark is elicited, he rings the alarum, and those on the sea, within the influence of the well known sound, hasten to port, while those in the field fly to their homes. Why not adopt this very simple principle on the coasts of our "sea-girt isle," and in the islands over which Britain sways her sceptre? nay, why not introduce this electric indication of the coming storm on ship-board? The meteoric glance that flashes on the masts of ships at sea, are known by foreign sailors as the lights of Santa Elmo, Santo Pietro, and Castor and Pollux. These influences are the harbingers of the tempest, and might impart a practical lesson for the government. An electric star sometimes may lighten sailors at night, previous to the thunder-storm, and in a highly electric condition of the atmosphere; but in the case of that of the castle of the Doino, it is, in all probability, induced electricity, or electricity by induction. I am quite sure that the resources of electricity, in relation to meteorology, have not been sufficiently explored or examined, and applied. I have been led to these considerations and reflections, by observing that a motion touching this recent disastrous shipwrecks—victims of the late harricane—is about to be submitted to Parliament. I will confess, however, that as the authority of a name, which the accidents of circumstances have placed above his fellows, the humble claims of truth moving on a lower plane have little chance, and that it will share the same fate with the similar motions which have preceded it. The coterie of favourites in political science, and the "authority of a name," will outweigh all other considerations. I might refer, in proof, to the circumstances attendant on Bellingham's motion, some years ago, which had for its object a similar purpose, and which terminated in mere verbiage and waste of time. In a future communication, I may trouble you with some remarks on the lifeboat, essentially connected, as it is, with the present inquiry.

Lichfield, Feb. 16. J. MURRAY.

NEW PATENTS FOR FEBRUARY.

[From the *Mechanics' Magazine* of this day.]

J. Kymer, coal-proprietor, Pontardulais, South Wales, and T. H. Leighton, chemist, Llanelly; for improvements applicable to the burning anthracite, or mineral coal, and other fuel, for the purpose of obtaining heat.

J. Crannis and R. Kemp, furriers, Southwark; for certain improvements in wood-paving.

B. B. Blackwell, gent., Newcastle-upon-Tyne, and Wm. Norris, civil engineer, Exeter; for an improvement in coating iron, nails, screws, nuts, bolts, and other articles made of iron, with certain other metals.

L. H. Potts, M.D., Greenwich; for a new or improved method or methods of conveying goods, passengers, or intelligence.

F. R. Conder, engineer, Highgate; for improvements in the cutting and shaping of wood, and in the machinery for that purpose. (Being a communication.)

W. Newton, civil engineer, Chancery-lane; for an improved system of working coal-mines, and quarries of stone, marble, and slate; which may also be applied to the making of tunnel borings, or to other like purposes. (Being a communication.)

G. B. Thorneycroft, ironmaster, Wolverhampton; for improvements in furnaces used for the manufacture of iron, and also in the mode of manufacturing iron.

Wm. Wrangham, Newport-street, Lambeth; for an improvement in preparing aerated water.

C. Clark, merchant, Great Winchester-street; for an improved pyro-hydro-pneumatic apparatus, or means of generating, purifying, and condensing steam, and other vapours; and of extracting from vegetable substances the soluble portions thereof; as also the application of parts of the said apparatus to other heating, evaporating, and distilling purposes.

T. Wolferstan, ironfounder, Salisbury; for certain improvements in axletrees and axletree boxes.

A. Brewer, wireweaver and felt-manufacturer, Surrey-place, Old street road; for improvements in machinery for manufacturing paper. (Being a communication.)

J. Bagnall, jun., ironmaster, Oak Farm Iron Works, near Dudley; for improvements in apparatus for retaining the wheels of carriages, in the event of an axle breaking, or otherwise.

C. Brook, cotton-spinner, Meltham-mills, York; for certain improvements in the apparatus used for purifying gas.

W. R. Shaw, engineer, Leeds; for certain improvements in feeding or supplying steam-boilers with water.

D. I. Westheimer, West-street, Finsbury-circus; for improvements in calculating machines, part of which improvements is applicable to purposes where wheel-work is required. (Being a communication.)

SPECIFICATIONS OF RECENT PATENTS.

William Revell Vigors, Esq., Russell-square, for a mode of keeping the air in confined places in a purer or respirable state, to enable persons to remain or work under water and other places, without a constant supply of fresh atmospheric air. (Being a communication.) Patent dated *July 7, 1842*. Specification enrolled *January 7, 1843*.—The invention which is the object of this patent is that already so well known to the public as that of Dr. Paverne, on whose behalf, and his own, the patent has been taken out by Mr. Vigors. The first thing claimed and specified in the improving of the atmosphere, in confined places, of the carbonic acid gas which it contains, produced from respiration or combustion, by means of quick lime and caustic alkali, or of the lime alone, which is to be dissolved in eight times its weight of water. The air in the apartment is to be passed through this caustic solution by a pair of bellows, the nozzle of which reaches nearly to the bottom of the vessel containing the lime and water. The vitiated air thus coming in contact with the lime, the carbonic acid gas is absorbed. It is calculated that one cubic foot of atmospheric air must be purified for each person per minute. 2. The patentee claims the restoring the requisite quantity of oxygen, to supply the place of that consumed; which oxygen is to be procured from the chlorate of potash, or driven off from the peroxide of manganese by means of heat, into the apartment, or allowed to escape from vessels into which it may have been previously compressed. 3. The patentee claims, further, the purification of the air contained in the diving bell, by the process described in claim 1, and the restoring the requisite proportion of oxygen from a vessel attached to the diving-bell, into which the oxygen had been previously compressed; also the allowing the escape of atmospheric air, which had previously been compressed several atmospheres into two compartments, one of which is situated at each end of a diving bell, somewhat resembling a boat inverted, the centre one being occupied by the diver or workmen, who may, by means of stop-cocks, regulate the supply according to their wants.—The specification is of extraordinary length, filling no less than ten skins of parchment; but the above extract contains all that is material in it.

Thomas Bell, mine agent, Saint Austin, Cornwall, for improvements in the manufacture of copper. Patent dated *July 29, 1842*. Specification enrolled *January 29, 1843*.—The ore is passed through a sieve having four meshes to the inch; it is then put into hoppers over an aperture formed in the top of the roasting furnaces, into which it is allowed to pass, by withdrawing the slide. The ore having been mixed with about one twentieth part more or less, according to the nature of the ore, of lime, or other calcareous substance, is then spread evenly over the bottom of the furnace, to be subjected to the action of the fire. Mr. Bell makes use of a double furnace, or furnace of two chambers, one opening into the other; the fire is applied at the end of the first, and the gases, &c., evolved, escape at the outer end of the second. When the ore has been sufficiently roasted, being then in a molten state, the upper part is raked off, but that beneath, being in a more refined state, is to be drawn off, by tapping the side of the furnace. The metal in this state is to be broken into pieces of ten or twelve pounds weight, and placed in a heated cupola along with coke or charcoal, and a small quantity of lime, or other calcareous matter, taking care to arrange matters so as to have always one column of coke up through the centre. The cupola is worked by any of the common methods, and the blast may be either cold or hot. As the molten metal runs out from the tap hole at the bottom of the cupola it passes over a box containing sand, into which the finer part of it is deposited; the remainder, flowing over, falls into a trough of water, which is kept constantly cool by a feed pipe. The metal precipitated into the cold water is broken up and reduced to a fine granulated state, after which it undergoes the process of jigging, by which it is separated from all earthy particles, &c. The advantages of this process are stated to be—1st, time saved; 2nd, economy of fuel; 3rd, saving in the expense of furnaces; 4th, increased quantity of granulated metal obtained from a given quantity of ore.—The patentee's claim is not to any part of the process separately, but to the combination of the whole, in the manner before described.

OLYPHOGRAPHY, OR ENGRAVED DRAWING.—The attention of the public has so frequently of late been directed to improvements in Electrotype printing, and the strides of science have accomplished so much with which the world is familiar, that we are somewhat at a loss how to extend attention to what appears to us the greatest triumph yet achieved. Mr. R. Palmer, of Hoxton-street, has patented a process, by which he can accurately transfer drawings to a metallic substance, which, on being sufficiently raised, can be worked, with type, at the common printing press, with precisely the same effect, and applicable to the same purposes, as a wood engraving. The pamphlet, title which we have been favoured, is published at so cheap a rate, and details so explicitly the process and important objects of the invention, and, moreover, is so beautifully illustrated with specimens, that we feel deterred from entering on minutely into a description of its contents as we should have done had the means of procuring such information been less easy of access. It is decidedly one of the greatest improvements of the day, and should be encouraged by all lovers of art, but by amateurs and authors resident in the country especially, as they will be enabled, by Mr. Palmer's invention, to have their own drawings accurately transferred to a glyphographic block (which combines the delicacy and finish of the metal plate with the facilities of illustration presented by the wood-cut), complete for the printer, without risking the frequent errors into which engravers are, or supposed to be, continually falling.

FEMALE AND INFANT LABOUR IN COAL MINES.—We find, from the proceedings in Parliament, that Mr. Cumming Bruce has given notice of a motion having, it is supposed, for its object, the virtual repeal of Lord Ashley's humane bill, carried during the last session, for ameliorating the condition of the females and infants employed in coal mines—or, at all events, the abandonment of some of its most vital clauses. We sincerely trust we may prove to be in error as to the purport of the motion, thinking, as we do, that no party would be found in either house, so lost to the feelings of humanity, as to brave the just public indignation which would inevitably be excited on an attempt to renew a system so rife in immoral tendency, and physical and mental degradation. We know that "a move" has taken place among the British coal-owners, as well as some workers in the north of England, but as we are entirely in ignorance of the "amendments" (?) suggested, we shall content ourselves with closely watching their movements, and, if any attempt is made to reconstruct the odious and condemned system, expose the designs and the designers, to the hatred and obloquy they so richly merit; at the same time that we shall scrupulously avoid leading ourselves to say "mercy" which may not be found on justifiable grounds.

SMITH'S PATENT WIRE ROPE.—We are informed that 120 fathoms, five inches in width, by three-quarters of an inch in thickness, equal to a strength, or strain, of thirty tons, and weighing about two tons, is about being applied to a colliery at Newcastle-under-Lyne.

DEATH, &c.—At the Paris Academy of Sciences on the 21 inst., M. Elie de Beaumont presented a specimen of quartz rock containing diamonds. Both a gentleman was wasting in geological collections. Whether the diamond has any here stood in local deposits, though there is no doubt the fossil remains which they are always discovered, are products of their original growth.

CURRENT PRICES OF STOCKS AND SHARES.

STOCK EXCHANGE, Saturday morning, Twelve o'clock.

Consols Money, 95⅞
Ditto Account, 95⅞ ¾
New 3½ per Cents., 102⅜ ¼
Reduced 3 per Cents., 96⅞ ¾
Reduced 3½ per Cents., 102⅜ ¼
Long Annuities, 12 15-16
Bank Stock, 174 ½
Exchequer Bills, 65 67 pm.
Belgian Bonds, 5 per Cent., 104½ 4½
Brazil, 5 per Cent., 74½ 74
Danish, 3 per Cent., 85⅞ ¼

Dutch, 2½ per Cent., 55½ ¾
Ditto, 5 per Cent., 102⅞ ¾
Portuguese, 5 per Cent., 38½ 40
Ditto, 3 per Cent., —
Russian, 5 per Cent., 116 ½
Spanish, Actives, 5 per Cent., 30¼ ½
Ditto, 3 per Cent., 37¼ ½
Chili, 6 per Cent., 79 81
Colombian, 6 per Cent., 14¼ ½
Mexican, 5 per Cent., 30⅞ ¼
Peru, 18 18½

(From our own correspondents.)

LATEST PRICES OF IRISH STOCKS.—3 per Cent. Consols, 95*l.* to 94⅞*l.*; 3½ Stock, 101*l.*; ditto New, 1830, 101⅝*l.*; 3½ per Cent. Debentures, 93⅞*l.*; Bank Stock, 181*l.*—Kingstown Railway, 105*l.*; Dublin and Drogheda, 25*l.*—Hibernian Bank, 39⅞*l.*; Royal Bank, 10*l.*; Provincial Bank, 40*l.*—City of Dublin Steam Co., 101½*l.*; ditto Stock, 1835, 48*l.*—Steam Ship Building Company, 40*l.*; British and Irish ditto, 50⅞*l.*—National Insurance Company, 30*l.*; Patriotic, 7*l.*—Mining Company of Ireland, 13*l.*; Wicklow Copper Mines, 15*l.*

LEEDS, THURSDAY.—The share trade has been without much activity during the past week. North Midlands have been held firmly, and are in demand at 64⅞*l.* to 65*l.*, thus proving how nearly we were right in giving our opinion that they would go to 65*l.* before the general meeting, which is held here to-morrow. Manchester and Leeds have advanced during the week to 74*l.*, but they have receded, and are now offering freely at 71*l.* to 72*l.* Edinburgh and Glasgow are very firm at 48*l.* to 49⅞*l.* ex div. The traffic begins to show signs of improvement, and this must, of necessity, influence prices. Hull and Selbys are offering in our market, and most certainly less than 40*l.* would not fetch them. In October last, we said, with respect to this stock, that "the straw was being moved," and our friends who acted up to our opinion, have good reason to be satisfied. Cheltenham Unions have been a good deal dealt in, and if the Great Western stock should maintain its price, they are worth buying at the present quotation of 31*l.* to 31½*l.*, two of these shares being equal to one Great Western half, according to the arrangement between the two companies. We hand the following as our latest quotations, viz.:—North Midland 64*l.*; York & N. Midland, 91½*l.*; Leeds and Selby, 101*l.*; Hull and Selby, 39⅞*l.*; Great North of England, 61*l.*; Manchester and Leeds, 71½*l.*; Sheffield and Rotherham, 24*l.*; Edinburgh and Glasgow, 48⅞*l.*; Bristol and Exeter, 56½*l.*; Cheltenham and Great Western, 31½*l.*; Northern and Eastern, 50⅞*l.*—Leeds Banking Company, 16½*l.*; Leeds and West Riding, 5½*l.*; Leeds Commercial, 3*l.*; Yorkshire District, 5½*l.*—Leeds and Liverpool Canal, 500*l.*; Huddersfield, 10½*l.*; Rochdale, 55*l.*—Leeds and Yorkshire Assurance Company, 13½*l.*—Leeds Old Gas Company, 225*l.*; Leeds New Gas Company, 58*l.*—Leeds Commercial Buildings, 2*l.* — R. S. WATSON & CO.

HULL, THURSDAY.—Prices have been well supported, and sellers have obtained higher rates for the few lots of shares that have exchanged hands.—Birmingham & Derby, 40*l.* to 41*l.*; Edinburgh and Glasgow, 48½*l.* to 48*l.*; Great North of England, 61*l.*; Hull and Selby, 38*l.* to 40*l.*; Leeds and Selby, 100*l.*; London and Birmingham, 204½*l.*; Liverpool and Manchester, 193½*l.*; London and Brighton 35*l.* to 35½*l.*; Manchester and Leeds, 72*l.*; Midland Counties, 63*l.*; Newcastle and Carlisle, 78*l.*; Northern and Eastern, 35*l.* to 36*l.*; North Midland, 64*l.*; South Eastern, 22½*l.*; York and North Midland, 91½*l.*—Yorkshire District Bank, 5½*l.* to 6*l.*; Hull Banking Company, 6*l.* to 6½*l.*—Hull Dock Company, 127*l.*; Hull Gas, 25*l.*; Hull Flax and Cotton Mills, 10*l.*; Hull Marine Insurance, 11*l.*

NEWCASTLE, THURSDAY.—The price of Great North of England Railway shares continues good in this market, and Newcastle and Carlisle Railway shares also maintain their price at present. [illegible]

SUNDERLAND, THURSDAY.—Sunderland Joint Stock Bank, [illegible]

BRISTOL, FRIDAY.—We have had a fair amount of business this week, at advanced prices, [illegible]

EDINBURGH, THURSDAY.—Edinburgh and Glasgow Railway, [illegible]

GLASGOW, THURSDAY.—[illegible]

BIRMINGHAM, THURSDAY.—London and Birmingham Railway, [illegible]

COAL MARKET, LONDON.

MONDAY.—Prices of coals per ton at the close of the market.—[illegible]

WEDNESDAY.—[illegible]

FRIDAY.—[illegible]

EXPORTS OF COAL DURING THE LAST NINE YEARS.

[illegible]

SALE OF COPPER ORES IN CORNWALL.

Sampled Feb. 6, and sold at Andrew's Hotel, Redruth, Feb. 23.

Mines.	Tons.	Price.	Purchasers.	Mines.	Tons.	Price.	Purchasers.
Tresavean	112	£7 19 6	Williams.	W. Provid.	29½	9 11 6	English Co.
ditto	101	4 14 0	Nevill & Co.	ditto	29½	9 11 6	Freemans.
ditto	73	4 1 0	Vivians.	ditto	30	8 10 0	Vivians.
ditto	65	6 7 0	Williams.	ditto	15½	4 19 0	English Co.
ditto	56	4 12 6	—	ditto	15½	4 19 0	Vivians.
ditto	52	4 18 0	Nevill & Co.	W. Gorland	81	6 5 6	English Co.
ditto	40	4 2 6	Williams.	ditto	31	3 7 0	Vivians.
Fowey C.	114	10 8 0	Vivians.	West Jewel	29	5 12 0	Freemans.
ditto	109	5 16 0	Freemans.	ditto	29	5 12 0	Nevill & Co.
ditto	42½	6 17 0	—	ditto	39	5 16 0	Freemans.
ditto	42½	6 17 0	Williams.	Charlestn'n	65	11 7 0	Vivians.
ditto	81	5 12 0	—	Harv.'s ore	27	2 14 6	—
Trethellan	98	4 7 6	English Co.	ditto	27	2 14 6	Freemans.
ditto	91	6 1 0	Freemans.	ditto	6	5 8 0	Williams.
ditto	79½	2 19 0	Vivians.	Penstruthal	42	10 0 6	Nevill & Co.
ditto	79½	2 19 0	Crown Co.	Francis'ore	34	2 19 6	English Co.
ditto	79½	2 19 0	Williams.	Wh. Toigus	20	2 14 6	Freemans.
ditto	17	8 13 6	Vivians.	Cliff Downs	29	2 18 0	Vivians.
W.Caradon	130	7 1 0	Williams.	Gt.W.Char.	10	2 15 0	F. Grenfells.
ditto	78	4 13 0	—	ditto	4	1 1 0	—
Holmbush	108	5 5 6	Vivians.	ditto	2	4 13 6	Mines Royal
ditto	101	8 8 6	Williams.	U. Wood	14	4 15 6	Freemans.
P. Consols	107	6 18 6	Nevill & Co.	Harmony	12	3 12 6	Williams.
ditto	91	6 12 0	Williams.				

TOTAL PRODUCE.

Mine	Tons	£ s. d.	Mine	Tons	£ s. d.
Tresavean	500	£2800 2 6	Charlestown U. M.	65	£737 15 0
Fowey Consols	389	2626 7 6	Harvey's ore	60	179 11 0
Trethellan	794	1386 7 6	Penstruthal	42	421 1 0
West Caradon	208	1450 4 0	Francis's ore	34	101 3 0
Holmbush	294	1094 5 0	Wh. Toigus	20	80 5 0
Par Consols	198	1306 19 0	Cliff Downs	29	84 2 0
Wh. Providence	121	979 14 6	Gt. Wh. Charlotte	16	41 1 0
Wh. Gorland	112	612 2 6	Wh. Unity Wood	14	66 17 6
West Wh. Jewel	97	561 0 0	Wh. Harmony	12	43 10 0

Average standard, 107*l.* 5s.—Average produce, 8⅞.—Average price, 6*l.* 5s.—Quantity of ore, 2429 tons.—Quantity of fine copper, 202 tons 8 cwt.—Amount of money, 15,077*l.* 14s. 6d.—Average standard of last sale, 107*l.* 15s.—Average produce, 9.

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
Mines Royal Company	2	£9 7 0
English Copper Company	257	1387 15 9
Vivian and Sons	536½	361 1 0
Freeman and Co.	410	2278 15 3
F. Grenfell and Sons	14	31 14 0
Crown Copper Company	29½	86 10 0
Sims, Willyams, Neville, Druce, and Co.	327	2024 4 0
Williams, Foster, and Co.	852½	5064 6 2
Total	2429	£15,077 14 6

Copper ores for sale on Thursday next, at Farquharson's Hotel, Truro.—Mines and Parcels.—United Mines 1214; South Caradon 422; Halleubeagle 401; Fowey Consols [illegible]

[illegible]

SALE OF COPPER ORES AT SWANSEA.

Sampled January 31, and sold on the 22d February.

[illegible]

Total tons, 1261.—Total amount, £25,797 18 0

TOTAL PRODUCE.

[illegible]

COMPANIES BY WHOM THE ORES WERE PURCHASED.

[illegible]

WORK PERFORMED BY CORNISH ENGINES

[illegible]

LATEST CURRENT PRICES OF METALS.

LONDON, FEBRUARY 24, 1843.

[illegible]

EXPORTATION OF THE PRECIOUS METALS.—[illegible]

PRICES OF MINING SHARES.

Two very encouraging reports from our Foreign Mines will be found elsewhere—one from the Alten, and the other from the St. John del Rey. The shareholders in the former, having long despaired of ever seeing any return for the capital expended, may now reasonably hope for better times, as the report of a careful examination of the lodes on the mine is a harbinger to the cheering intelligence that the property is valuable, and likely to prove highly productive. Some of the reports from our Cornish mines are also satisfactory.

BRITISH MINES.

Shares.	Company.	Paid.	Price
500	Anglesey	5	—
4,000	Bedford	1½	3½
100	Botallack	175	850
20,000	British Iron	70	—
8,000	Blaenavon	50	—
120	Brewer	—	120
79	Budnick	—	20
1,000	Carn Brea	15	150
3,000	Con. Tretoil Mining Ass.	4	¼
2,000	Cornubian Lead Co.	2	2½
512	Cook's Kitchen	—	50
112	Charlestown	—	300
128	Cregg Brawn	40	—
128	Cosheen	15	75
10,000	Durham County Coal Co.	37	9
128	East Pool	—	850
100	Great Consols	97	600
10,000	Hibernian	12½	1½
1,000	Holmbush	14	42
2,000	Isle of Sark (Guernsey)	11	8
80	Levant	—	450
20,000	Mining Co. of Ireland	7	13½
128	Mostyn Mines	100	—
70	North Roskear	—	300
3,000	Polberou Consols	10	—
10,000	Rhymney Iron	50	—
128	South Caradon	—	800
800	South Towan	10	¼
64	South Wheal Basset	—	500
37	Speam Moor	70	100
135	Tregolian	—	2
4,000	Treleigh Consols	5	1½
6,000	Tamar Consols	3	4½
6,000	Tincroft	7	11
128	Trewavas	—	110

BRITISH MINES—continued.

Shares.	Company.	Paid.	Price
120	Treviskey and Barrier	—	780
96	Tresavean	—	1100
120	Trethellan	—	220
4,000	United Hills	5	4
6,000	Wicklow Copper	5	3½
3,645	West Wheal Jewel	10	15
120	West Trethellan	75	30
50	Wheal Vor	500	—
1,000	West Carbery	—	½

FOREIGN MINES.

Shares.	Company.	Paid.	Price
6,000	Alten Mining Company	13½	2
10,000	Anglo Mexican Co.	100	1½
3,374	Do. Subscription	25	21½
2,000	Bolanos	150	45
	Ditto Scrip	15	7
10,000	Brazilian Imperial	21	7
10,000	Bolivar	20	¼
10,000	Ditto Scrip	10	2
10,000	Cata Branca—Brazilian Company	4½	—
12,000	Cobre Copper Company	40	24 25
8,500	Colombian Co. regis.	55	7
10,000	Copiapo Mining Co.	13½	9½
20,000	General Mining Asso.	20	4
5,351	Mexican Company	53½	1
12,000	Mocambes and Cocaes	25	4½
14,382	Real del Monte, regis.	424	1½
	Do. unregistered	—	3½
	Ditto Loan Notes	150	60
7,000	Royal Santiago	10	22
11,000	St. John d'el Rey	15	30
40,000	United Mexican	40	1½ ¼
	Black Scrip, addl. capital	5	1½
	Red New Scrip	1½	3

RAILWAY SHARE LIST AND TRAFFIC RETURNS.

The railway meetings which have taken place during the past week, present no particular features beyond regular progression to established undertakings. By an article in another column, it will be seen that two of the projected French lines, to the extent of nearly 180 miles, are in an advanced state, and are expected to be opened in May next; it will be gratifying to English capitalists' engaged in these undertakings, to find that the French Government have entered upon this subject with the spirit it deserves, and which will, doubtless, meet ample reward, in giving a vast stimulus to employment, and to trade generally.

Line.	Entire Lgth.	Now Open.	Present actual cost.	Pd. on share.	Val. of share.	Last week's Returns.
Arbroath and Forfar Railway	15	15	£136,768	25	22	£136 19 1
Birmingham & Derby Junc.	48½	48½	1,113,402	100	40½	939 14 9
Birmingham and Gloucester	55	55	1,460,651	100	45	1469 5 0
Brandling Junction	25	25	434,824	50	—	—
Chester and Birkenhead	14½	14½	538,424	50	30	326 17 3
Dublin and Kingstown	6	6	340,262	100	77½	457 18 0
Dundee and Arbroath	16⅞	16⅞	145,502	25	6	117 15 11
Durham and Sunderland	16	16	266,132	50½	18	360 10 0
Eastern Counties*	126	17½	2,104,054	25	9½	813 14 1
Edinburgh and Glasgow	46	46	1,385,077	50	48½	1592 12 10
Glasgow and Ayr	51	40	930,406	50	40	770 13 3
Glasgow and Paisley Joint	22½	22½	740,289	25	25	664 4 6
Gd. Junc. & Chester & Crewe	115½	115½	2,318,326	100	204	6087 19 1
Great North of England	74	45	1,201,671	100	61	1169 19 4
Great Western	118½	118½	6,540,623	65	90⅞	10425 18 11
Hayle	18	18	125,000	100	—	—
Hull and Selby	31	31	645,306	50	39⅞	800 3 6
Lancaster & Preston Junc.	20½	20½	455,300	47	27½	—
Liverpool and Manchester	31	31	1,515,258	100	192	3336 7 9
London and Birmingham	112½	112½	5,922,812	100	211	12647 19 3
London and Blackwall	3⅞	3⅞	1,141,554	16⅞	5	455 10 11
London and Brighton	56	56	2,500,645	50	35½	2223 4 11
London and Croydon	10½	10½	618,749	18⅞	10	191 19 11
London and Greenwich	3¾	3¾	1,019,606	12½	4½	—
London and South Western	92⅞	92⅞	2,565,582	55⅞	63	3648 15 6½
Manchester, Bolton, & Bury	10	10	777,857	93	36	536 7 9
Manchester & Birmingham	40	31	1,782,981	40	33⅞	2700 0 6
Manchester and Leeds	50	50	2,913,110	70	72	4015 11 6
Midland Counties	57	57	1,679,300	100	62	2003 8 1½
Newcastle and Carlisle	61	61	—	100	78	1363 16 11
Newcastle and N. Shields	7	7	252,070	45	44	297 5 3
Northern and Eastern†	32½	32½	980,667	45	34	1011 9 9
North Midland	72⅞	72⅞	3,267,164	100	63	3400 19 10
North Union‡	22	22	612,829	75	75½	—
Preston and Wyre	19	19	317,000	50	30	135 11 7
Sheffield and Manchester	40	11	494,657	82½	32½	273 13 10
South-Eastern	87	66	1,900,982	50	22½	1050 10 11
Taff Vale	30	30	533,723	100	—	—
Ulster	25	24	314,883	25	—	456 6 7
York and North Midland	27	27	451,861	50	90½	1367 0 9

* Including Northern and Eastern Railway toll. † Rent and toll to Eastern Counties about 150*l.* per week included in the returns. ‡ The Liverpool and Manchester toll is deducted.

JOINT-STOCK BANKS.

The several meetings of proprietors of Joint Stock Banking Companies, held during the week, present the same cheering results which we have had so frequently to notice. The Dudley and West Bromwich have declared a dividend of 10*l.* per cent.; the Bilston District Bank, 7*l.* per cent.; the Devon and Cornwall Banking Company, 6*l.* per cent.; the Monmouth and Glamorgan Bank, 6*l.* per cent.; and the Birmingham Banking Company—notwithstanding the depression of trade in that neighbourhood, and the consequent diminution in their returns—have declared a dividend of 10*l.* per cent.

[illegible]

MISCELLANEOUS.

A special meeting of the British American Land Company was held on Wednesday, [illegible]

[illegible]

THE LONDON GAZETTE—BANKRUPTS.

TUESDAY.—[illegible]

FRIDAY.—[illegible]

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